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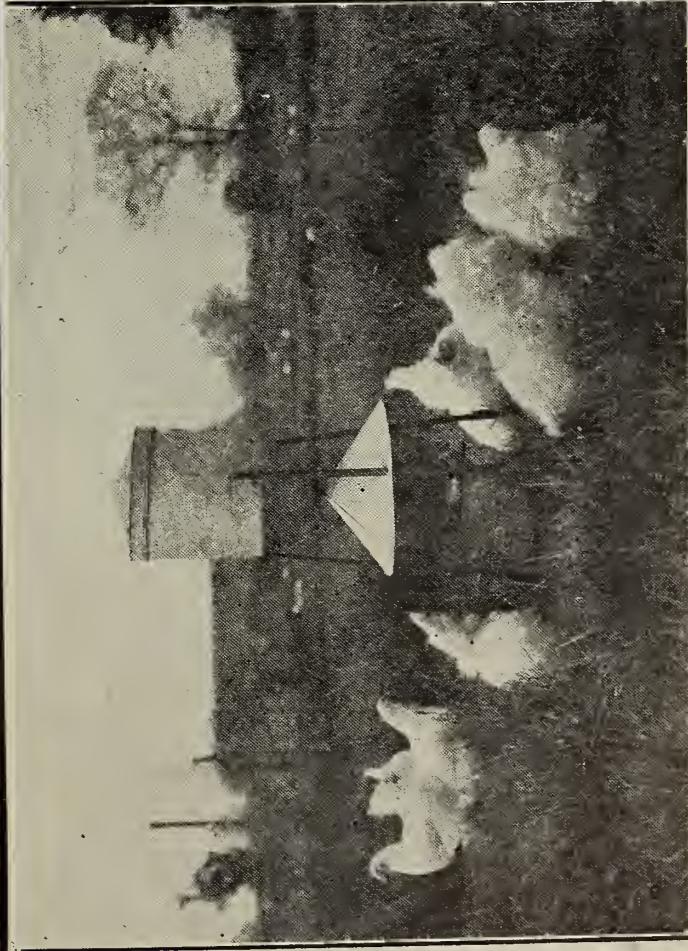
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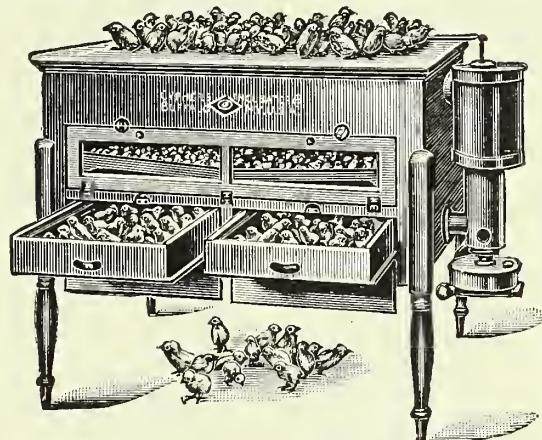
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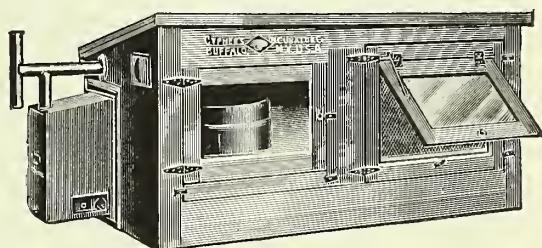
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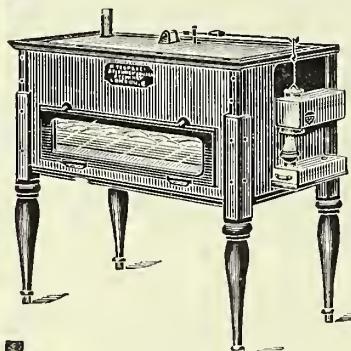
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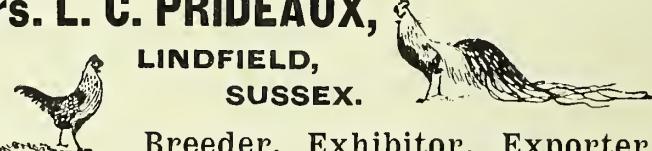
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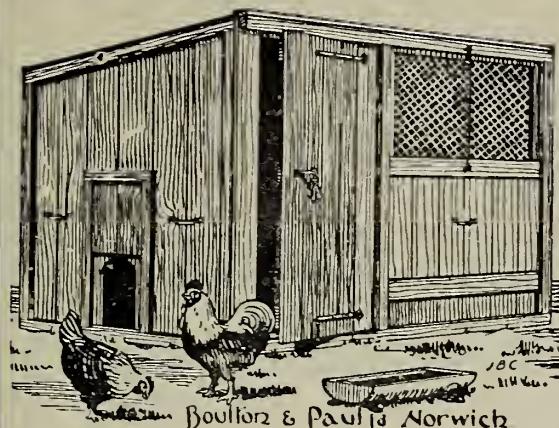
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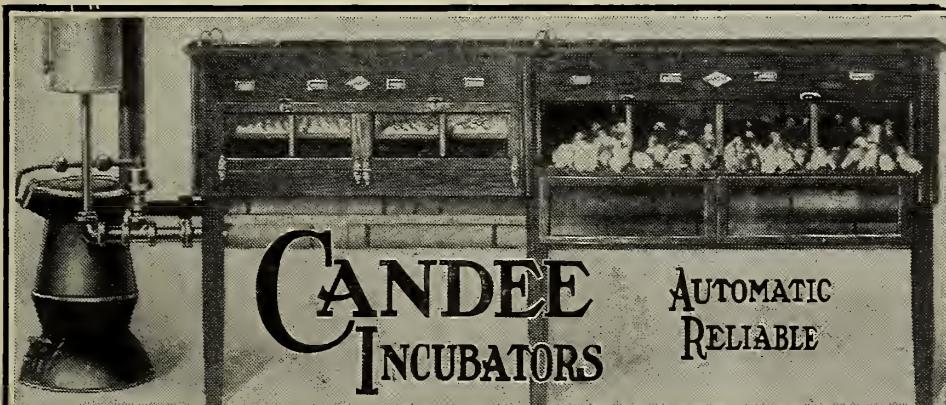
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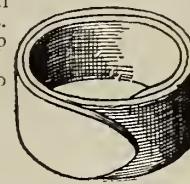
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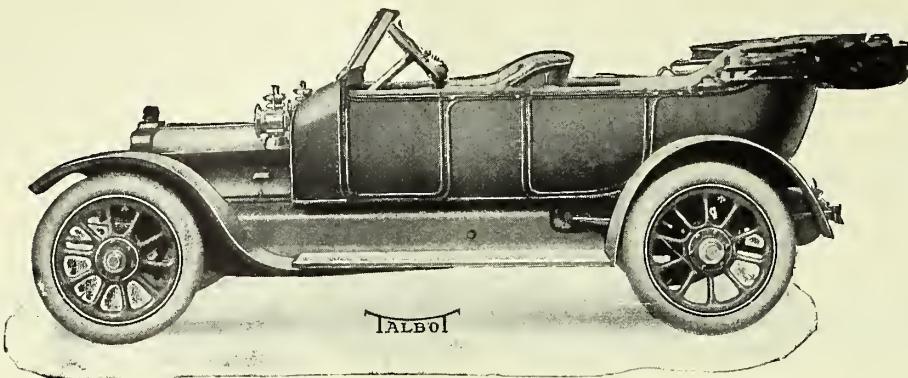
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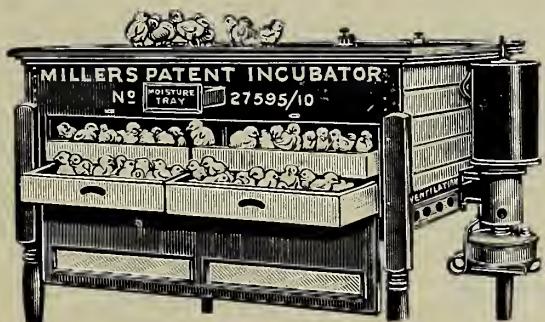
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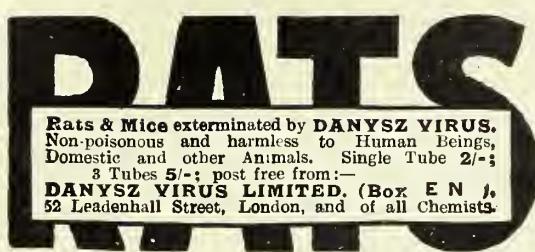
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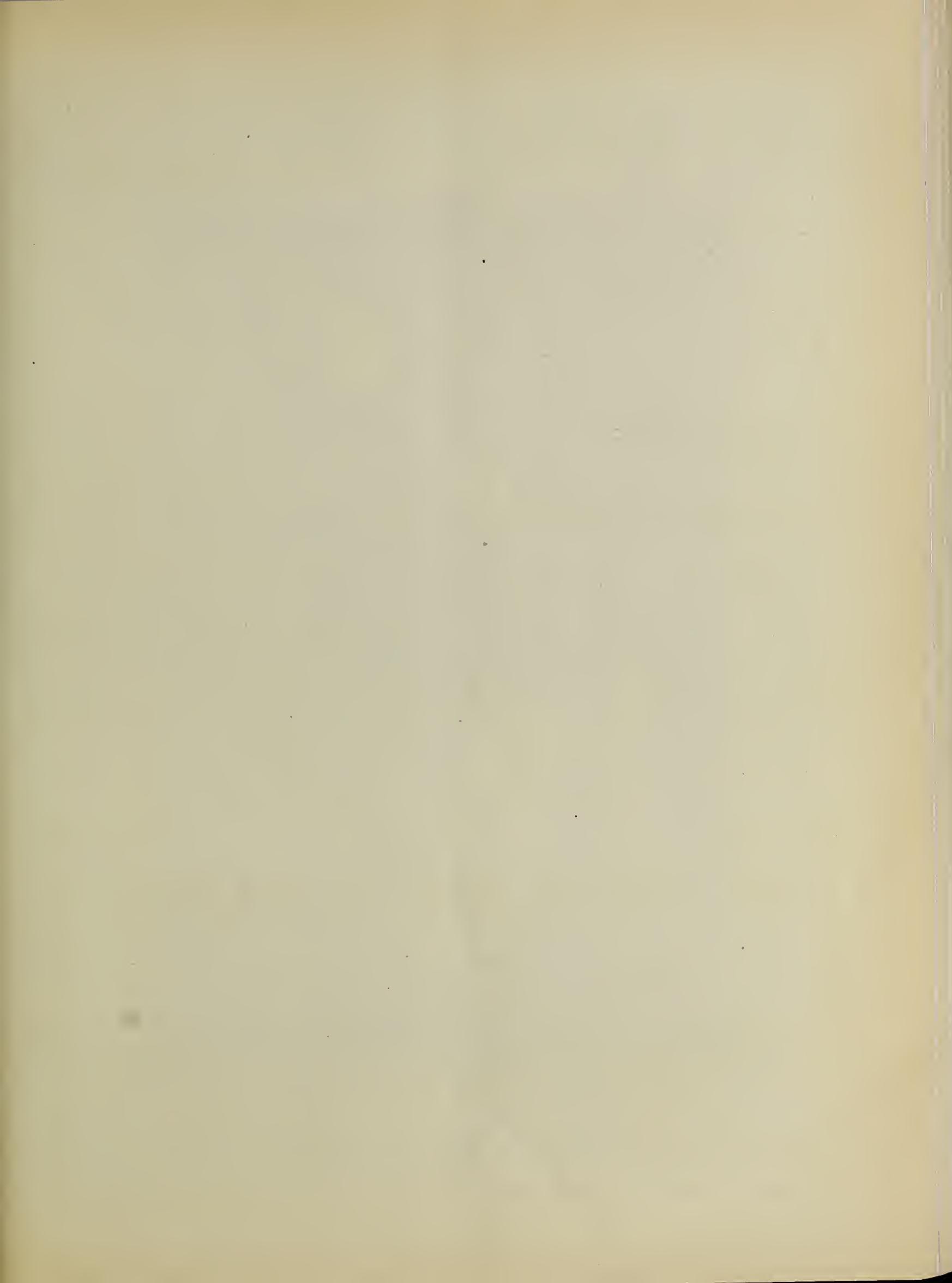
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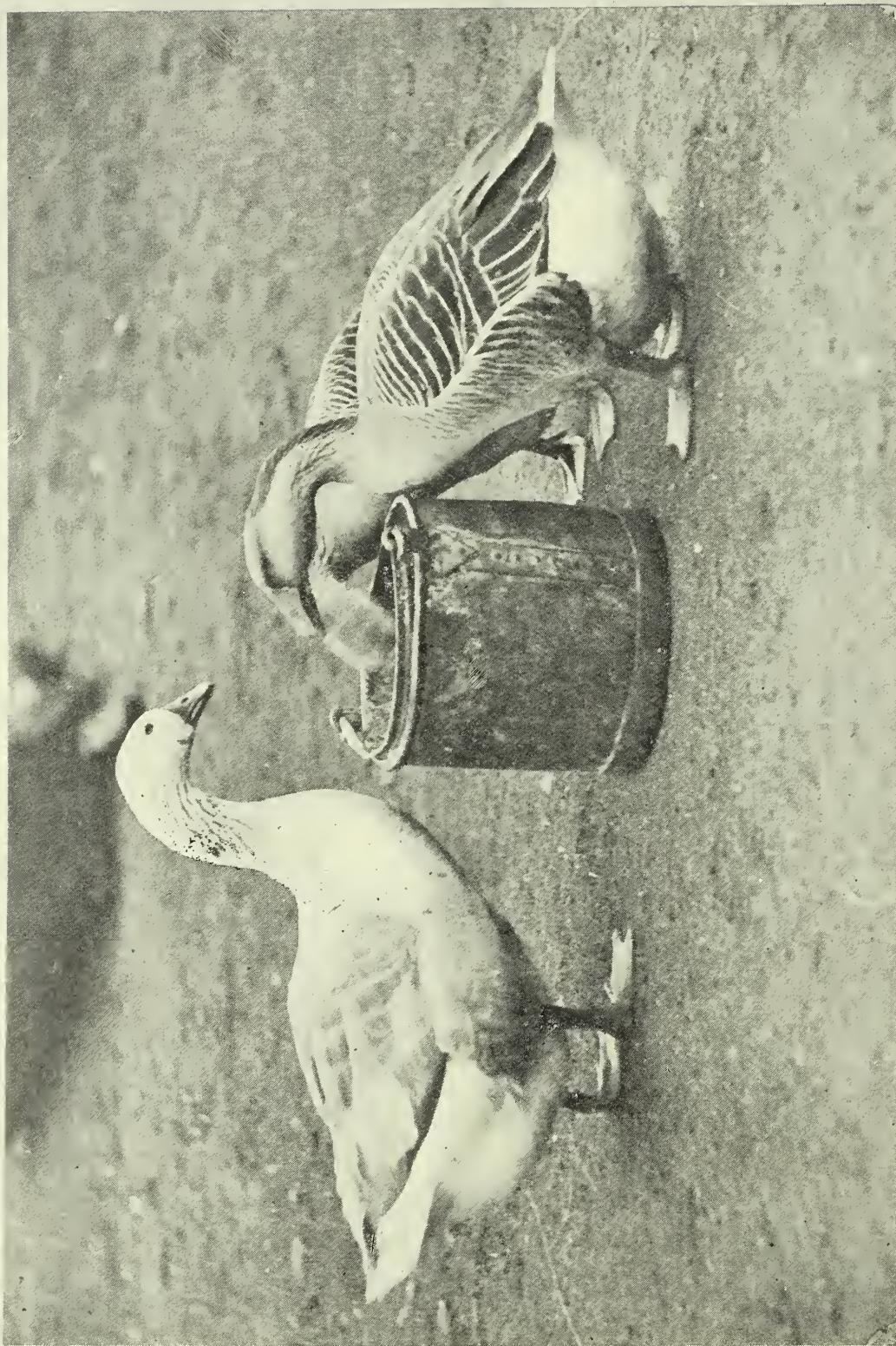
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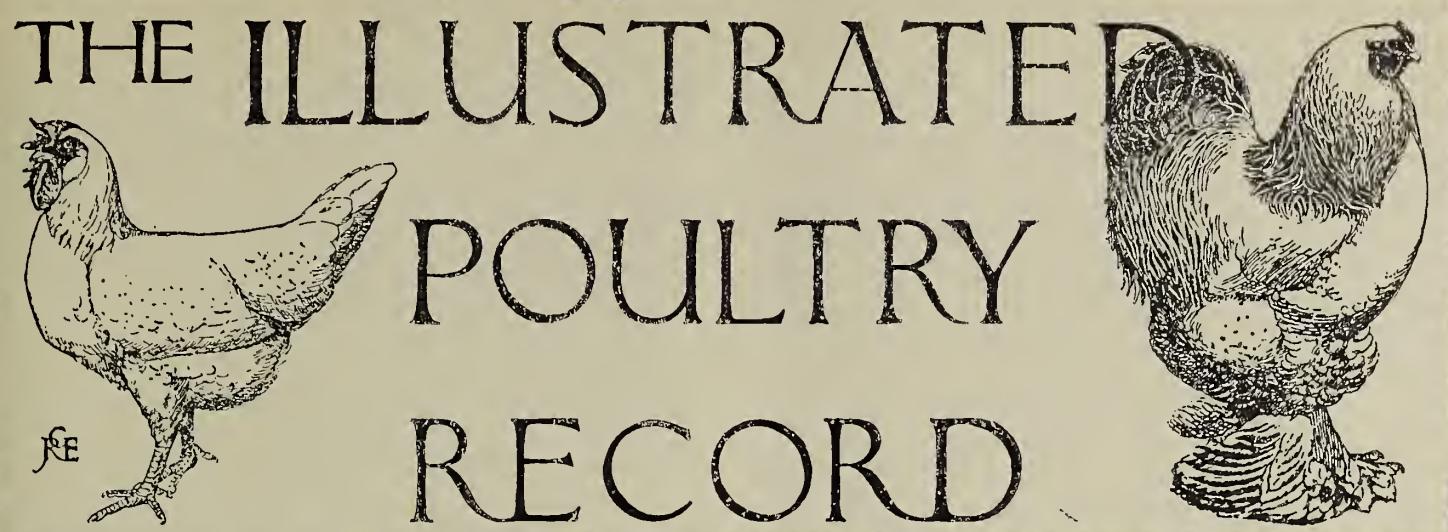


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THE ILLUSTRATED POULTRY RECORD



Vol. VI.—No. 3.

December 1, 1913.

Monthly, Price Sixpence.

DIARY OF THE MONTH.

EDITORIAL NOTICES.

ATLANTIC HOUSE, HOLBORN VIADUCT, LONDON, E.C.

Trap-Nesting.

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The Editor would like to hear from readers on any Poultry Topics, and all Queries addressed to the paper will be answered by experts in the several departments. The desire is to help those who are in difficulty regarding the management of their poultry, and accordingly no charge for answering such queries is made.

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The ILLUSTRATED POULTRY RECORD is published on the first of every month. Should readers experience any difficulty in securing their copies promptly they are requested to communicate immediately with the Editor.

The latest date for receiving advertisements is the 20th of the month preceding date of issue.

The utmost care is exercised to exclude all advertisements of a doubtful character. If any reader has substantial grounds for complaint against an advertiser he is requested to communicate at once with the Editor.

Periodical reconsideration of methods adopted is as necessary in connection with the Poultry Industry as all other pursuits. Determination of their value is not to be made until such systems are subjected to prolonged and more or less general experience. What appears to be useful and helpful at first, often proves either non-profitable or is lacking in the results anticipated after some years of trial. It is not surprising, therefore, that the reliability of trap-nesting is being questioned, at least so far as its final influence in selection of hens for breeding are concerned. Theoretically there was everything in its favour, in which respect it seemed beautifully complete. To breed from the best layers appeared to be the surest way to increase egg production. Therefore, the first step was to discern which were the most prolific members of a flock. That has not however, proved in practice to be enough. That trap-nesting has done great good everyone will admit, but probably more in the direction of eliminating the poor layers than in finding out the best. The facts stated in the quotations from Dr. Raymond Pearl's report given in the present and the previous issues reveal that the problem is wider than was supposed, and that there are factors involved which had not been thought of. Whether the ultimate solution of the problem will be on the lines indicated by Dr. Pearl has also to be proved. Even in that case the use of trap-nests is necessary in order to make selections as a basis for breeding. What we must realise, however, is that it is not in itself all that has to be done.

An Australian View.

It is ever desirable to have the views of others upon what we are doing, not alone for the reason that there is great benefit to be derived from alternative opinions, but also that the perspective is more correct when a distant view is taken. We who are in the moil and turmoil of work are too near to discern it as a whole. Interchange of observations and even criticism are, therefore, always to be welcomed. In this connection we have read with great interest the views of Mr. G. Woodward, one of the leading Australian breeders, as communicated to the *Daily Graphic* during his recent visit to this country. The gist of what he had to say is contained in the following :

Scientific breeding in England is not sufficiently recognised as a commercial proposition. You certainly have here about a dozen keen breeders, but the rank and file are hopelessly at sea in the questions of the rearing of chicks and in the foundation of all stock. These poultry farmers may breed successfully for a couple of years, but, being ignorant of the scientific aspect of the case (i.e., what are known as the laws of Mendelism), they make no ultimate progress, and, losing all enthusiasm, give up the fight in favour of some other pursuit. Old methods are relied upon, and new ones are very seldom introduced. The poultry industry in England cannot rely as a whole upon the enterprise of one or two individuals, but upon farmers and householders, who keep fowls for profit.

That there is much general truth in what is here stated cannot be denied, although it is only a partial statement of the case. That the scientific breeding of poultry has been mainly confined to exhibitors, as that utility breeders have not applied such methods nearly to the extent which we desire, must be admitted. There are, however, other considerations which are not taken into account, namely, the fact that this is an old settled country, and our chief object has been development in relation to the general farm conditions, rather than on specialist lines. The history of poultry farming in this country and elsewhere, even America and Australia, would support the contention that this is the line of permanency. That is a big question which cannot be discussed in a note.

The Paynter Experiment.

While we are waiting for full report of the experiment made at Haslington, Cheshire, during the last few months, it is of interest to note that Mr. Paynter is to be transferred to another county, probably in East Anglia, where he is, we understand, to be given a more favourable opportunity to test his system of producing profitably chickens for market on a small holding. The fact is, too much publicity was given to the work at Haslingdon, as a result of which the place was overrun with visitors, not only absorbing a large amount of Mr. Paynter's time,

but also adversely affecting the birds, who can never make the same growth if disturbed in this way as where they can be reared in quietude. A further point is that as an integral part of the system is the linking of cultivation with poultry raising; a year's test is of limited value, and does not prove it as a complete whole. It is the latter which ought to be determined.

The Sex Question.

Perennially the subject of how far sex in progeny can be influenced comes up, and yet in practical experience we seem as far from arriving at a solution as ever. How many theories have been promulgated in connection therewith it is impossible to state. Some of these make their re-appearance at stated intervals, often advocated as if they were new ideas. The fact is, however, that they all seem to fail in actual application. What would appear to be the latest observations on this important question is that the food consumed by the parents has much to do with the sex of the progeny. A German scientist reports experiments with bees, rabbits, pigs and cattle, for the purpose of testing his theories. He says that where the food is mainly carbonaceous more males are produced. If, on the other hand, the albuminoids are in excess the result is more females. This is a distinct advance on the suggestion of an Austrian observer some years ago, who advocated that the relative feeding of the two parents was the predominating influence, as that was in the case of poultry more difficult to arrange. The question is of such importance that we suggest the Board of Agriculture should provide for experiments to be made at, say, half a dozen centres in different parts of the country, at each of which there should be two lots of birds, fed upon food in which carbo-hydrates and albuminoids respectively should be in excess. We do not say a single season's test would be final, but it could hardly fail to be interesting.

Supplies to Fattening Establishments.

One of the main difficulties which have hindered the extension of poultry fattening centres, whether co-operative or under private control, is securing a supply of suitable birds in sufficient quantities. Several promising attempts made in other districts than the south-eastern counties have had to be given up for that reason. It was not due to lack of outlets for the finished birds at paying prices, but that labour and plant could not be kept employed and occupied except for a short period of the year, with a consequence that whatever was made then was more than lost at other seasons. We were discussing this question recently with one of the largest fatteners in the

kingdom, who stated that for many weeks his cages are half empty, and yet he must keep his men all the year, otherwise he could not retain them. All the evidence obtainable shows that the one hope for meeting the conditions here referred to is that where the soil and climate are favourable, breeders over the entire area must rear birds for sale to the fatteners, not merely at the usual season but during the greater part of the year. Extraneous supplies are unreliable. It is useless having a fattening plant unless it can be kept employed.

Foxes again.

As was pointed out in our November issue with the newer conditions resultant from a revision of our lauded system, the fox question is certain to be pressed forward for solution. A correspondent of one of the daily papers states that the attention of the Chancellor of the Exchequer has been called to the importance of this question by Miss Cook, of the Stone Cross Poultry Farm, who claims to have lost 721 birds without receiving a penny compensation. We can only hope that a lady may accomplish what men have failed in doing, namely, putting an end to what is an intolerable state of affairs. As indications of how the question is being regarded the *Westminster Gazette* says :

"In certain shires foxes have certainly destroyed 'tons of food.' The fact that some Hunts' poultry funds run into four figures speaks for itself. But all Hunts are not well enough off to be just in their dealings with the poultry-keeper."

And what is the poor poultry-keeper to do whose place in a debatable land is between two Hunts?

No doubt fox-hunting farmers have little or no ground for complaint, but every poultry keeper is not a fox-hunter, and the old contention that the Hunt was good for trade won't hold water nowadays, when hunting men readily use foreign food and bedding for their mounts, keep motors instead of carriage horses, and often provision themselves largely from the Stores."

An even more striking piece of evidence is found in report of an interview in the *Manchester Guardian* with Mr. C. E. Young, of Nantwich, a prominent Cheshire farmer, who stated that some tenants who rent their land from private landlords are in a position to press for and secure full compensation, but even their farming operations are restricted by fox-hunting. But for the foxes—which could be quickly exterminated if they were not preserved for the sport—it would be possible on many farms to treble the number of poultry, without materially increasing the present cost of maintenance, and he considered it a decided loss to the community at large that this cannot be done as things are.

What one may say a thousand think. The question is undoubtedly pressing forward to a solution.

Laying Type.

Here is involved the question as to whether the hen which has a capacity for laying a large number of eggs differs in build from one which is deficient in that direction. That it is so racially everyone will admit. The differences in view between good and bad breeds judged from their prolificacy are recognised. What we wish to discover is how far selection can be made by external appearance. In table fowls that is not difficult. The laying capacity is more elusive. It is of interest, therefore, to note in an article by Mr. Geo. Nicholls, appearing in *Feathered Life*, the case is stated for a laying type. He says :—

"Although 'laying-type' is much disputed, I am convinced it is a point that should go hand-in-hand with trap-nesting. You cannot establish a good laying strain unless they are built on right lines, and I should have no hesitation in discarding an otherwise good layer if she were deficient in these qualities, for she is certain to be the mother of a large percentage of indifferent layers. The fundamental attributes of laying type are: 1. Short legs, set wide apart, with plenty of stern, and tail carried high; 2. Bright eye; 3. Alert, active carriage; 4. An early riser and late going to roost. The width between the legs is a step to developing a well-proportioned stern, and when this has been attained, nature, abhorring a vacuum, fills the cavity supplied with an increased size of ovary."

Here we have definite suggestions as to discernment of a laying type, the testing of which are within the opportunities of many breeders. What we should like to see would be observations in measurements and results carried out with hundreds of specimens of different breeds, and the laying results noted.

Irish Exports.

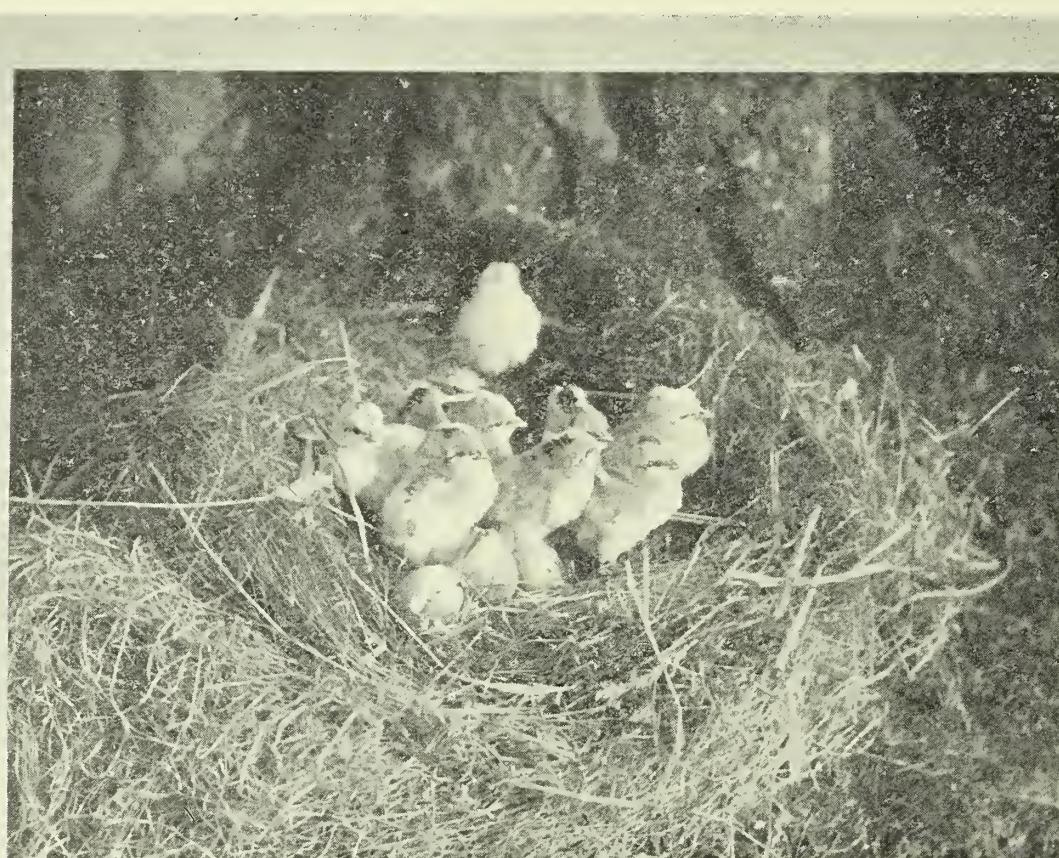
The annual returns issued by the Irish Department of Agriculture show a slight decline in egg exports for 1912 as compared with 1911, amounting to 175,241 great hundreds, and in values to £13,645 thus sharing the same advance in prices noted on all sides. In fact the number of eggs sent out of the country is smaller than any one of the previous four years save 1910. The maximum year was in 1908. This indicates, either a check to increase of production or a greater consumption in Ireland itself, which there is no means of saying. The eggs imported in 1912 were 99,208 great hundreds, of a declared value of £45,326, which was more than in any of the previous three years; but slightly less than in 1908. It is stated that of these £8,171 came direct from abroad, inclusive of £4,090 worth from Russia. So far as poultry were concerned there is a rise in quantity of exports but a much greater increase in values. The figures are remarkable

and deserve setting out :

| 1911. | | 1912. | | Increases. | |
|---------------------|--------------|---------------------|--------------|---------------------|--------------|
| Quantities. cwt. | Values. £ | Quantities. cwt. | Values. £ | Quantities. cwt. | Values. £ |
| 303,902 | 850,926 | 317,685 | 1,037,771 | 13,783 | 186,845 |

Thus in 1912 Ireland shipped to Great Britain 50 per cent. more in value of poultry than all the rest of the world together. The total value of Poultry imported into Ireland in 1912 was £19,564, a little less than in the previous year. The total value of eggs and poultry shipped to Britain last year was £3,964,353, or with feathers just over four million pounds sterling.

different. As we pointed out in our September issue there are districts where, so far as local supplies are concerned, the producers and consumers are in such close proximity that eggs at any rate pass directly from farm to household, or at most with one intermediary. Under such conditions combinations of producers have not much opportunity and certainly where local supplies do no more than meet a fraction of the demand, as a consequence of which prices are usually very good indeed. Within those sections of the country where production is greater than consumption the



A Brood of Sicilian Buttercups.

[Copyright]

This interesting breed was fully discussed in our last issue by Miss Stanton.

Co-operation *versus* Private Trading.

The perennial question as to whether consumers are better served by private traders or co-operative societies does not concern us here. The considerations involved are complex in the extreme, and experiences vary. What is an undoubted fact is that distributive co-operation is almost entirely restricted in this country to what may be termed a second class trade, and that private trading grows much more rapidly in this direction than co-operation. So far as producers are concerned the case is totally

conditions are totally different. Here is it that co-operation has its opportunity. In fact, it is a necessity, in that by throwing responsibility upon producers in respect to marketing they are made to realise quality is a prime factor if they desire to obtain the best possible returns. Moreover, it frees them from the bonds which have only too much fettered them in the past, and compels adoption of methods in conformity with present day requirements. There are many difficulties to be overcome, but that these can be conquered has been abundantly proved.

THE REHABILITATION OF THE GOOSE.

By EDWARD BROWN, F.L.S.



HE question has often suggested itself to my own mind, as it doubtless has to that of others, whether any steps could be taken to restore the goose to some measure of its former popularity.

That this species has in our own land, as in many others, declined in the favour with which it is regarded by householders is unquestionable. Probably the actual number of these birds consumed is, in spite of a considerably increased population, less by half of what it was thirty years ago. I can remember the time when from September onwards to January, and more especially at Christmas, the number of geese displayed on poulters' stalls was large to what is now the case. Records also show that at an earlier period it was even more so. Further evidence is that these birds were seen in the rural districts, more especially upon open lands to a much greater extent than is now the case. In some sections of the country where goose breeding and rearing formed an important part of the annual production, such is no longer the case. In eastern and parts of southern Europe geese are still largely bred, due mainly to German consumption, which is well maintained. Upon that point much evidence is given in my "Report on the poultry industry in Germany." The fact is, this branch is the only section of poultry-keeping which, with the exception just quoted, has declined.

A DECLINING BUSINESS.

Why this change should have taken place has been explained before, but may be stated once more. Both of the causes are general in many countries, probably in all that can be regarded as well cultivated. What we have, therefore, to keep in view is that these prevail over very wide areas, and with advancement of cultivation on the one hand, and of altered conditions of life on the other, there is every apparent tendency towards a continuance of what is here set forth. It is said that demand creates supply, and that supply stimulates demand. Such is largely true, with exceptions, of which the goose is one, for we have, as a rule, and certainly in the British Isles, an equal reduction both of supply and demand, otherwise the lessened output would have caused a rise of prices, which has certainly not been the case, for during recent years the prices at which good geese could be bought are less than twenty to thirty years ago. That is the phenomena of the poultry industry, and deserves consideration. Nor is this to be ex-

plained by imports from abroad, upon which some people are ever ready to throw the blame when anything goes wrong. It is true we have considerable supplies from various European countries, but these have not increased and they merely cater for the cheaper trade. We must look, therefore, for other reasons.

LESSENED SUPPLIES.

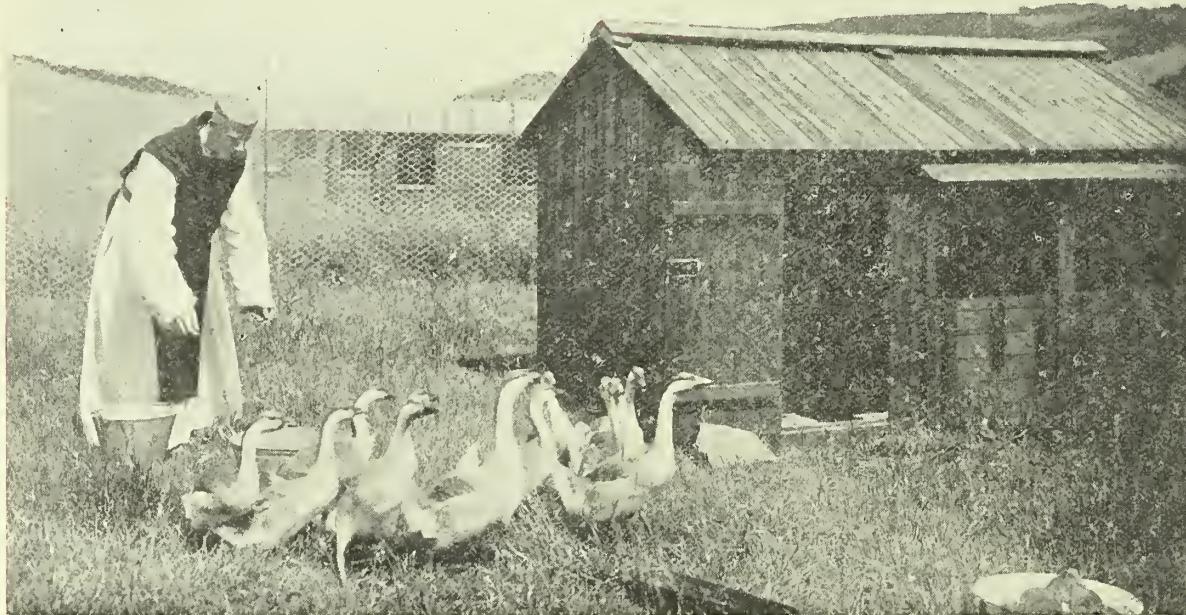
Sure in those countries where the land is mainly open and largely rough pasture, fewer geese are kept. That is the case even in Germany, where the consumption is still very general, as the people are great goose eaters. During my observations throughout the Fatherland, almost everywhere that fact was recorded, so that the supply is chiefly Russian, upwards of seven million live geese being imported annually. As cultivation increases, geese decline. Such was true in France, in Denmark, and in Northern Italy, as it has been in Great Britain and Ireland. With enclosures the profitable growing of these birds is lessened. In days gone by, in the great majority of cases, they were bred and reared on common lands, where they found the major part of their food at no cost to the owners. That there was great benefit thus derived by goose breeders under these conditions cannot be doubted. Unfortunately, over large areas, as has been succinctly expressed, the common was stolen from the goose, which is more serious in its ultimate effect than stealing the goose from the common. That, however, is not all. Wherever cultivation has advanced, farmers have found that they could turn their fields to more profitable advantage, and without the damage they feared to crops and pastures. With the decline of arable land and laying down so much of the country to grass, many of those who had been accustomed to buy annually a flock of goslings for putting on the stubbles have ceased to do so, which explains why the imports of lean geese from Ireland and the continent of Europe have decreased to so large an extent. At one time that was a huge trade, but it has shrunk greatly. It must be admitted that farmers knew their business well, for, especially in view of lower returns, the contraction of opportunity meant that what might at one time leave a moderate margin of profit, no longer did so. The result is indicated in the poultry census of 1908, wherein it is shown that on the farms of Great Britain there were only eight adult geese per thousand acres of cultivated land. Although Ireland has nearly twice

as many of these birds as in the whole of Britain, due to its greater extent of open lands, the same tendency is to be noted. In that country the annual returns show that in 1907 there were 506,960 adult geese, and in 1913 455,468, or a decline of nearly ten per cent. This will assuredly continue at an accelerated pace as the country attains a greater degree of cultivation. The total number of geese bred annually in the United Kingdom is about 1,700,000, or slightly over one-fifth of a goose per family of five persons per annum. That is, indeed, a poor result. Unfortunately, we have no comparative figures available to help us in finding to what extent there has been a decrease in actual numbers, as the census taken in 1884 and 1885, so far as Britain is concerned, did not discriminate between young and old birds.

REDUCTION IN DEMAND.

What has here been stated would probably not have taken place to nearly the same extent had the decline in supplies, as is generally true, been accompanied by a corresponding increase in values. Such has not, however, been the case, otherwise we might have sought an

worthy of study. Formerly, there was a great demand for geese at the Christmas season. That was the great treat of the domestic festival. Goose clubs enabled even those with modest means to indulge to that extent, and the sale through their media was very large indeed. If no bird of this class was purchased at any other time, then it made an appearance. Such is no longer true to the same degree, so far as our own country is concerned. The demand is for other classes of meat. The change in taste is by no means restricted, however, to this instance. It is not merely a question of fashion. My own firm belief is that there is something deeper accounting for what is here indicated. With the changed conditions of life, the need is for something finer and more delicate, less of a fatty nature. Men and women whose work does not involve strenuous physical exercise have not the same power of assimilating coarser and heavier foods to the same extent as their forefathers who spent their lives in the open air, and they have not yet learnt to prepare dishes, as in some continental countries in which the goose meat forms but a part. There is also an economic reason, namely, that with the produc-



A flock of geese on Caldey Island.

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explanation in the influence of higher prices. It is unquestionably the fact that, as already stated, the consumption of this class of poultry has steadily, even rapidly, decreased within recent years. In multitudes of households a goose is never found upon the table from one year end to another, the reasons for which are

tion of bigger geese, which was the rage for a long period, these were too large for ordinary households, and it is a question whether they are as profitable to buy, even considering the lower price per pound than, say, the turkey, which yields, *pro rata* a higher proportion of edible flesh to the gross weight. This question

of size is further discussed below. My own view is that of the causes referred to, that which has been mainly responsible is the nature of the flesh itself.

SIZE OF GEESE.

As I have previously pointed out, throughout Southern Europe the type of goose generally met with is smaller in size of body than those generally found in the western and northern countries of the Continent. These are, in my judgement, descended from the Roman goose, still to be found in Italy. During my visits to the last-named country, as to Southern Germany and Austria, I realised that this was the general type. Plump, fleshy specimens, weighing in the late summer eight to nine pounds are to be seen on the markets, and appear to meet with a steady demand. These birds come within the purchasable power of a large number of householders, which would not be the case with larger specimens. As is well known such foreign geese as are imported into Britain are smaller than native supplies, or even those from France. Poulterers report that within recent years the demand on our markets has been for birds of a more moderate size. The question is, therefore, whether by the introduction of smaller races than the Embden and Toulouse we could not rehabilitate the goose in popular favour, provided, of course, that these were fleshy in relation to the total weight. It is certainly worth a trial.

SELLING GEESE.

Were what has just been suggested carried out, and geese of a size more in keeping with the requirements of ordinary householders offered for sale, there is every probability that we should find a much larger demand from Michaelmas onwards. There is also another new development which I should like to see tried, namely, the selling of parts of a goose. That plan is common in many continental countries, more especially where larger geese are common, as in France and Northern Germany. In the latter this system is carried out most completely. Every part of the goose appears to be utilised. Even the skin is cooked in some cheap restaurants, and is said to make a highly appreciated dish among the poorer sections of the community. This method has many advantages, and could hardly fail to largely increase the sale of goose flesh among great multitudes of those who probably never taste it from one season to another. There is no reason whatever, save that of custom, which can be urged against this plan. If a sucking pig is sold in parts, why not a goose, or even a turkey? By doing so every class of the community could be provided for. Those who were willing to pay

a higher price per pound could have the breasts, others the legs, and so on. This may be regarded as a question for poulterers and retailers rather than breeders, but is important to the latter, in that we might anticipate a greatly increased demand from which they would reap a benefit. Ultimately it might mean the complete rehabilitation of the goose on British tables, and an extension of the period of consumption, with, possibly, higher values. It is, however, poulterers alone who could test whether a sale can be made in this way. It is certainly worth a trial on their part.

COST OF PRODUCTION.

In view of the prices obtainable for geese in these days the margin of profit disappears unless they can be fed in the cheapest manner. Apart from green goslings I question whether geese can be grown profitably unless they find in a natural manner practically all their food from about eight weeks onwards to the time when fatting commences. In this may be included spilled grain when placed on the stubbles. That is practically a waste product, and cannot be obtained except by birds of one kind or the other. Such, however, is not sufficient. Geese are by nature grazers, and from, say, May onwards to the time of harvest, should cost very little indeed for food. If kept upon pasture land to the exclusion of larger stock, that adds to the expense, from which fact we find an explanation of reduction in numbers of geese under these conditions. The fact must be admitted that this species cannot be expected to increase upon highly cultivated lands, and as small holdings increase, the opportunities will be denied to an even greater extent. The large farmer who has some rough or wood land might do a great deal more than at present. Even with him, however, the margin of profit cannot be anything but small. If he wants a flock of geese for autumn or winter sale it pays him better to buy lean birds in August and September. The price at which these can be bought, 2/6 to 3/- each, does not leave much to the grower. There is yet in this country a large amount of land, known as rough grazings, upon which geese might be bred and reared in large numbers. Should the projects now put forward for recolonisation of these sections of the country be materialised, an opportunity will be afforded at present denied. There the cost of production would be comparatively small. If, in addition to this, the suggestions already submitted, namely, selection of a smaller type of goose, and sale of geese in parts, this branch of the poultry industry might recover its lost position. To that should be added the desirability of marketing geese earlier.

THE PLACE OF THE GOOSE.

By J. W. HURST.

IT is difficult to say just why the public demand for goose flesh has declined in this country, but there is no doubt that the domestic descendant of the Grey-lag has been unduly neglected for some time. There are, however, signs of reviving interest—among which may be included the Editor's willingness to stimulate breeding by giving special attention to the claims of the goose in this number of "THE ILLUSTRATED POULTRY RECORD."

Whilst it is not easy justly to apportion the blame for the slight that has been put upon so eminently respectable, dignified, and well-conducted a bird, there are two factors that have undoubtedly been influential. The first is the change in taste, consequent upon modern alterations in the mode and standard of living; and the other, it may reasonably be suggested, is the operation of the Inclosure Acts and the better cultivation of the land. That the latter influences operate in the same direction in other countries is a fact that is brought out in Mr. Edward Brown's "Report on the Poultry Industry in Germany." Commons, wastes, and forest lands have long been associated with the production of geese. Gilbert White noted the value of such tracts of land, which he described as being of considerable service to neighbourhoods that verge upon them "by maintaining their geese"; and in arguing against the curtailment of the rights of commoners John Stuart Mill urged the hardships inflicted upon the cottager "who had a goose upon the common." During my own occupation of a farm, the tenancy of which carried with it certain rights in regard to an extensive tract of forest—such as common of pasture, common of estovers (the cutting and using of wood and litter) and the common of turbary (or cutting of turf)—the question of grazing rights for geese was raised, and a partially successful fight put up by the commoners. It is not, however, part of my present intention to enter upon a discussion of the land question in this or any other of its several aspects. I am only mentioning facts which must be included among the causes of the decline in goose breeding. But whilst it is inevitable that the goose must give place to improved husbandry, there still remain extensive areas upon which geese might be kept and bred without any interference with other or more profitable interests. There remains plenty of opportunity for production, and because the older breeders have been displaced there is—as regards accommodation—little reason why others, who are more favourably placed, should

not engage in gosling rearing. There is, however, this difficulty—the would-be producer is confronted with the fact of a limited demand. How far can that demand be extended by increasing the output—that is the question. It is a moot point.

According to the poultry census the goose population of Great Britain is no more than two per hundred acres, and the smaller the acreage of the holding the higher the average number kept. The official returns do not, however, accurately represent the position of affairs relative to geese any more than they give a just estimate of the extent to which the common domestic fowl is kept. The stock of back-yarders, suburban and country cottage poultry keepers, would make a tremendous increase in the number of fowls returned, and there is no doubt the goose figures would be materially increased by the numbering of the flocks that are ignored by the census takers. During the past summer I saw very large numbers of geese running on grass land over which the owners of the birds possessed the right of pasture. It would be interesting to know how far, if at all, such birds are included in the returns. Evidently all would be omitted that belonged to occupiers of less than one acre, although they would probably be included in the schedules of those holding one acre and upwards—despite the fact that the birds themselves graze on common land. Anyway, if all the geese that graze on commons and are the property of occupiers of less than an acre were included, the result would not vastly increase the average number of birds per hundred acres; and that the present output of home reared birds falls short of even the existing limited demand is sufficiently proved by the not inconsiderable volume of the imports. It consequently follows that there is a sufficient demand to justify some immediate increase in production, although it is not so clear that—having passed that limit—a much greater demand is capable of being encouraged by further production.

As far as my experience is concerned I have found it more difficult to induce people to take up goose breeding than any other form of poultry production, however favourable the situation and circumstances of the individuals concerned. On the other hand, nearly all the old-established goose breeders with whom I have come in contact are reasonably satisfied with their results in this department of production. Given the right conditions these birds are suitably remunerative, yet for some reason beginners do not

adequately replace the old breeders as they drop out. Perhaps it is that the limitations of the existing demand have been unduly emphasized, and that expert advisers have erred on the side of caution—although this is not a common fault in connection with poultry farming. However that may be it would appear that a diminishing demand, rather than the contrary, is encouraged by the tendency of production.

A goose in the wrong place is an unprofitable bird, as is any other in similar circumstances, but there is no reason why it should be entirely excluded from the scheme of things. It has a legitimate economic position relative to producer's opportunities and consumers' requirements. There are in general but two situations in which the breeding of the common domestic goose is really worth while, upon the farm and upon the common, but if the character and extent of the pasturage is suitable, the goose will thrive contentedly, and reproduce its kind with profit. It is true that it is not always properly placed on the farm, because its profitability is relative to that of the other possible uses of the land occupied, nevertheless it is more often than not subjected to the unmerited suspicion of agriculturists, in addition to the previously mentioned discredit consequent upon fickle fashions in gastronomy.

The farmer must inevitably regard the goose from the point of view of the grazier, and that the goose consumes a rather considerable amount of herbage cannot be gainsaid, although the quantity is not excessive in the case of early maturing goslings killed off the grass at the "green" stage. Moreover, the character and value of the herbage varies, and on many farms there is land that is of less value for other than for this purpose. The legitimacy of the goose's place on the common or forest needs no insistence.

Further, the fact that the place of the goose has undergone some change during recent years, in the popular estimation of seasonable dietetics, is all in favour of the producer, with whom the production of "green" goslings is generally more profitable than that of the fat goose. That the season for the former is more extended than for the latter is another favourable factor. The birds may be disposed of as they reach a suitable age and condition, in a succession of broods; consequently the land need not necessarily be so

heavily stocked, or for so long, as when all are run on for September or December. Not only are the birds more quickly off the land, whilst the cost of production is minimized, but killed at the "green" stage they are in a much more desirable condition for the table than those that are fed up to the old-fashioned standard of grossness.

FRENCH EXPERIENCE.

A recent work entitled *La Basse Cour*, par L. J. Troncet et E. Tainturier, published by the Librairie Larousse of Paris, deals also with the fattening of geese, and with the subjoined translation we close our symposium on this subject :

Fattening of geese takes place from September to November, with those birds which have already attained sufficient development.

Commencement is made at first by giving additional food consisting of oats, buckwheat, or peas; then, after a week, whilst the birds are good in flesh though not very plump, they are placed in quiet and restricted runs, or are enclosed in boxes, or in fattening pens.

The system here indicated is sufficient to bring the geese to a state of suitable fatness, but in the countries where they have in view the production of foie gras, the procedure is altogether different.

At Toulouse cramming is adopted by means of a funnel, morning and evening, with maize until they



Plucking geese for Christmas.

[Copyright.]

are quite full. Thirty litres (27 quarts) of this grain is sufficient ordinarily to fatten a goose to the weight of 10 kilogrammes (22½ lb.), and the operation does not exceed a month. . . .

It must not be thought that maize is the only food employed to obtain a fat goose. Potatoes, meals, oily grains, betel nuts, walnuts, and flax seeds are all used for the purpose. Some feeders add a spoonful of oil for each bird every time of feeding.

GOOSE FATTENING—YESTERDAY AND TO-DAY.

THE system of fattening geese is very ancient. It was practised by the Egyptians four thousand years ago, as indicated by the tablets in the tomb of Tighe, and in Italy during the period of the Empire. Of the methods then adopted the accounts are very incomplete. We are compelled, therefore, to confine ourselves to later periods, and below give extracts from various sources.

SEVENTEENTH CENTURY METHODS.

The *English Husbandman*, written by Gervasse Markham, was published in 1615, and is noteworthy in that it is one of the earliest books dealing practically with poultry in relation to agriculture. In a quaint manner it describes the system of fattening geese followed at that period—that is, three hundred years ago :

After a gosling is a month or six weeks old you may put it up to feed for a greene Goose, and it will be perfectly fed in another month following: and to feed them there is no meat better than slegge Oates, boyld and given plenty thereof twice a day, Morning, Noone and Night, with good store of Milke or Milke and Water to drinke. . . . Now for the fattening of elder Geese which are those which are five or six months old, you shall understand that after they have been in the stubble fields, and during the time of harvest got into good flesh, you shall then chuse out such Geese as you will feede, and put them in severall pennies which are close and dark, and there feede them thrice a day with good store of Oates, or spelted Beannes, and give them to drinke water and barley-meale mixt together, which must evermore stand before them; this will in three weekes feede a Goose so fatte as it is needful.

In a work entitled *Systema Agriculturæ; the Mystery of Husbandry Discovered*, Published for the Common Good: by J. W. Gent, in 1675, the following account is given :

The Young or Green Geese are best fattened, if kept dark, and fed with ground malt and milk mixed together.

But in fatting of Geese you may observe that they usually sit, especially in the night time, with their Beaks or Bills on their Rumps, where they suck out most of their moisture and fatness at a small bunch of feathers, which you shall finde standing upright on their rumps, always moist; which if put away close before you put them up for fattening, they will be fat in much less time, and with much less Meat than otherwise.

They will feed on, and fatten also with Carrots cut small, and given them.

The Jews, who are esteemed the skilfullest feeders that be, do wrap the Goose in a Linen Apron: they hang her up in a dark place, stopping her Ears with Pease, or some other thing, that by neither hearing nor seeing of anything, she be not forced to struggle more cry. After they give her pellets of Ground-malt or Barley, steeped in water thrice a day, setting by them water and gravel; by which manner of feeding they make them so fat that it is almost incredible.

MOUBRAY'S SYSTEM.

Bonnington Moubrey's *Treatise on Domestic Poultry* was first published in 1815. After describing

the method of feeding goslings on the stubble and by corn and green food, he goes on to tell how to bring the birds into fat condition :

Geese managed on the above mode will be speedily fattened green, that is, at a month or six weeks old, or after the run of the corn stubbles. Two or three weeks after the latter must be sufficient to make them thoroughly fat; indeed, I prefer a goose fattened entirely in the stubbles, granting it to have been previously in good case, and to be full fed in the field; since an over-fattened goose is too much in the oil-cake and greese-tub style to admit even the ideas of delicacy, tender firmness, or true flavour. But when needful to fatten them, the feeding houses already recommended are most convenient. With clean and renewed beds of straw, plenty of clean water, and upon oats crushed or otherwise, pea or bean meal, the latter, however coarse, or ordinary food, or pollard; the articles mixed up with skim milk when to be obtained, geese will fatten pleasantly and speedily. I know nothing of the imposthume said by our elders to grow upon the rump of the feeding goose, and through which she perpetually, like a bear, sucks her own fat, and which thence must needs be expected.

PRESENT-DAY GOOSE FATTENING.

An exhaustive article by Mr. Edward Brown, F.L.S., appeared in the *Journal of the Royal Agricultural Society* for 1899, dealing with "Geese and Geese-breeding," from which we cull the following paragraph treating upon the final finishing of the produce :

During the last three weeks the geese should be confined in sheds or pens, about twenty or twenty-five in a batch. The place selected for this purpose should be roomy and be well ventilated, but must not be very cold or subject to great variations of temperature, or the flesh development will be retarded considerably. An excellent plan is to have a range of pens, each with an open forecourt, either around three or four sides of a square, or along one side, and to allow each batch out in turn for feeding during which time the pens can be cleaned out. The advantage of the square arrangement is that they are more sheltered from wind and rain. Each batch should be killed at the same time, and thus it is better, when putting up, to grade according to the respective sizes of the various specimens. If a few are taken out of a batch those remaining are liable to fret and lose flesh. For feeding off the grains most suitable are oats, either whole or crushed. Barley meal, mixed with brewers' grains and potatoes, are excellent for this purpose, but oats steeped or simply thrown into water, produce the finest quality of flesh, possessing firmness without hardness. Beans and peas should be avoided as they make the flesh hard. Indian corn is frequently employed, either whole or ground, and there can be no question that it gives weight and bulk, but the result is unsatisfactory, in that the body and intestines are charged with a large amount of yellow, oily fat, which runs away into the dripping tin when the bird is cooked. Moreover, the appearance of a maize-fed specimen is never so pleasing as when oats are employed.

THE WAY FOLLOWED IN AMERICA.

The annual report of the Rhode Island Experiment Station at Kingston for 1897 contains a large

amount of information respecting the goose industry in that country, and thus explains the system adopted by those who prepare these birds for the fall markets:

Geese for fattening should be penned upon high, gravelly soil, or land that will not become muddy in wet weather. A pen for fifty geese should be perhaps 40ft. or more square, and should be bare of green crops, and provided with some shelter from the sun.

When the weather is cool they fatten more rapidly. When penned for fattening they may be fed for one or two days quite moderately, in a way to prepare them for the regular fattening ration. During this time they can have a little green food and such grain food as they have been accustomed to. For fattening they should be fed upon scalded dough, made from Indian corn meal and sweet beef scraps. Water should be provided in pails or buckets, giving them a fresh supply three times daily, but only sufficient



A reminder of last April; a foretaste of next.

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A good shelter may be made by putting four crotched posts in the ground, upon which rails can be laid covered with white birches or boards. These may be fastened down so that a high wind will not blow them off or injure the geese in the pen. A wire fence, four or six feet high, is suitable for the sides of the pen. In fattening goslings during the warm weather of summer, provision should be made for as much air as possible. If the weather is warm they eat less, and consequently fatten more slowly.

for them to drink, and not enough for them to attempt to bathe, as water spilled around the pen is apt to make the ground muddy, and any unnecessary exercise is a hindrance to fattening. It is better to have two pails each half full of water than one filled to the top. Goslings can then only get water for drinking, which is all that is desired. Care should be taken that the scalded food is always sweet, and does not stand long enough to become sour and unwholesome. The corn meal and the beef scraps

should be of the very best quality, and mixed in the proportion of one part of scraps to four parts of meal, by measure, and a little salt should be added, just enough to season it, care being taken not to use too much. . . . Feed in the morning what dough the goslings will eat up in an hour after feeding. At noon feed whole corn in the same way, but at night a considerably larger quantity of dough can be given them, as they will eat more sometimes during the night, when the weather is cooler, than during the whole day. A little powdered charcoal should be

mixed with the dough about twice a week. . . . No green food is given after the first day or two. They should have a constant supply of gravel, crushed oyster shells, and broken charcoal. The latter is especially desirable on the score of health, and it is also thought to assist in obtaining a white fat. Decayed stumps, or partially rotted wood, are greedily eaten by geese when fattening, and a moderate supply seems to do them good. It requires usually seventeen to twenty days' steady feeding to fatten goslings.

TURKEY AND GOOSE.

Some Opinions, Ancient and Modern.

By A. T. JOHNSON.



LTHOUGH the turkey in its own country—America—is an autumn fowl, properly belonging to Thanksgiving Day, it has, during the last century-and-a-half, gradually been supplanting the boar's head, the roast beef and the goose at our Christmas feasts. To-day it is not only more popular as a Yule-tide dish than it has ever been but it is in greater demand than any other. Though an alien and—comparatively—a thing of yesterday it has won its way into our hearts (and stomachs) thrusting the poor old goose into second place.

Hops and turkeys, carps and beer
Came into England all in one year,
says an old rhymster who, if not quite accurate, indicates the associating of turkey with good cheer as early as the beginning of the sixteenth century.

A learned apothecary and scribe of the name of Salmon wrote in 1695 of turkey thus: "It is a most excellent food and of great nourishment; you may concoct broth, ale or jelly of it against consumptions, for it restoreth strength plentifully and agrees with all dispositions."

Here is a seasonable extract from no less a celebrity than the sagacious Dr. Kitchiner:

"If you wish a turkey, especially a very large one, to be tender, never dress it for at least four or five days (in cold weather eight or ten) after it has been killed. No man who understands good living will say 'On such a day will I eat turkey,' but will hang it up by four of the large tail feathers, and when, on paying his morning visit to the larder he finds it lying upon the cloth prepared to receive it as soon as it falls, that day let it be cooked."

Doubtless very excellent advice, more especially for birds that have not been artificially fattened. For if these are hung as we should hang game the difference between them and the verage cold storage, or more recently killed

specimens, is incredible until tried. Both flavour and texture of flesh are vastly improved by the process and tenderness assured.

Though we may "understand good living," or think we do, there is ample evidence to prove that we do not derive as much enjoyment from our food as our forefathers did, gouty and dispeptic as they often were. Cold-storage is a good deal to blame for this. It may be, and doubtless is, a great blessing, but we have had to pay dearly for it and must continue to do so. For, not only does it rob the feast of its flavour in the most literal sense of the phrase, but it has robbed the seasons of their flavour also—of their own peculiar and time-honoured meats. With green peas at Christmas and pheasants in June our appetites may be tickled with the sauce of novelty, but they are never whetted by that anticipatory zest with which a Christian stomach awaits the dishes which custom and nature have ordained to appear at their appointed season and none other. The sort of delicious foretaste that must have stimulated old Dr. Kitchiner's gastric juices and flavoured his imagination when, morning after morning, he entered his larder in sweet anticipation of the moment when his suspended turkey would give the word "ready," by dropping out of its own tail and falling as falls a fully ripened fruit from the branch, is not for us.

But, notwithstanding the popularity of turkey and a public taste in which I, personally, do not claim a share, the American bird, is a quite modern innovation compared with the European goose. The origin of the latter, as a domestic fowl, is lost in the mists of antiquity. In the days when history was written on papyrus in the land of Egypt, geese were domesticated, valued as food and changed hands as money in commercial transactions. Pliny has told us of the great processions of geese which waddled all the way from north-east Europe and over the Alps to Rome where they were fed up with figs

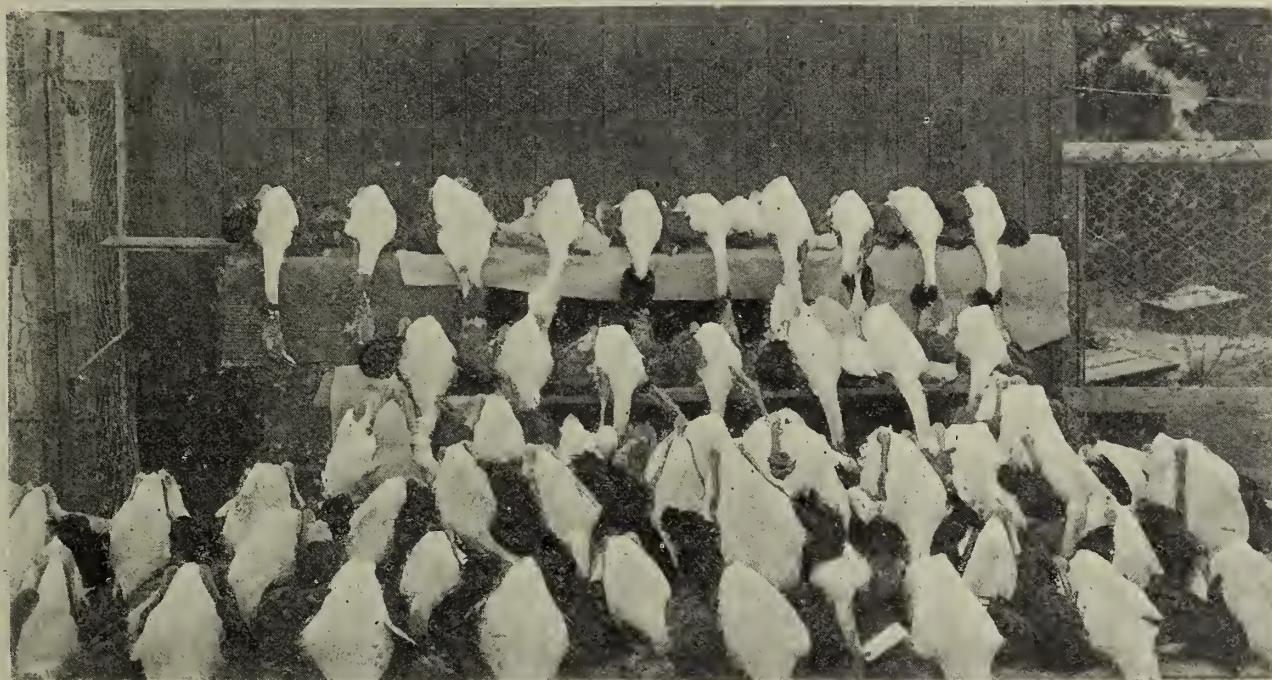
so that the stomachs of the gentlemen of the Eternal City might rejoice. Cæsar is said to have been prouder of his geese than of his warriors; Horace and Herodotus have both immortalised their virtues, and Lucretius has given the world the story of how the white geese—the sacred white geese of the Capitol—by their cackling, raised the alarm which led to the capture of the thieves who would steal golden Jupiter. And Columella, who is probably the oldest poultry farmer in history, has left us directions for the selection and breeding of this venerable fowl.

It is a curious fact that all, or nearly all, these historical references to goose should refer to a

those great flocks of white geese which ministered to the luxuries of Rome, then the system of selection and breeding carried on in those dim ages must have been not only more extensive but of greater antiquity than we are always apt to realise.

But to return from this digression to our feastings—to goose.

"Of a certain two-legged animal with feathers it is said," wrote the dispeptic philosopher of Chelsea, "if you draw a distinct chalk circle round him he sits imprisoned, as if girt with the iron ring of fate; and will die there, though within sight of victuals—or sit in sick misery there, and be fattened to death. The name of this



A fine display of turkeys ready for supplying the Christmas demand, which seems to increase year by year.

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white bird, for it is generally acknowledged that the ancestor of our various domestic breeds—of the Toulouse and Embden at any rate—is the Grey Lag, a variety of wild goose. Doubtless the great demand for the plumage, which existed as far back as the days of Rome's greatness, was the main factor in determining the colour, but some early writers have referred to the greater docility of the white birds as compared with the grey. Furthermore, white animals in pre-Christian ages were more commonly invested with sacredness, or veneration, than others, which also would tend to favour the increase of the ancestors of our Embdens and fix their most characteristic feature, and the knowledge of these things only makes it the more evident that, if the Grey Lag were the original parent of

poor two-legged animal is—goose; and they make of him, when well fattened, *pâté de foie gras*, much prized by some."

Thus submissively does the only bird that ever laid a golden egg patiently endure the process of developing a morbid enlargement of the liver that the tables of princes and epicures may proclaim its praises, and that (despite the presence of turkey, which some very unpatriotic Yankee once described as "a lousy fowl") its ancient glory shall still shine in the prime delicacy of the feast.

The ordinary man, who has not yet been demoralised by turkey, will not only be satisfied with the goose of the normal liver but he will, provided he is master of his own destiny as regards his Christmas dinner, select his bird

with a nicer discrimination than that usually displayed by the poultreyer. But first let me say that one of the reasons—perhaps the principle one—of goose having fallen out of public favour is this: the consumers have become so satiated with the grossness of the coarse, over-fattened specimens of our markets that their senses, no less than their digestions, have revolted. Goose, having become an ogre of obesity, we have recoiled from the very prospect attacking such a forbidding object. It, in common with many, perhaps most, other things has been sacrificed to a prevailing craze for size. The bigness and the fatness thereof has been made a feature of our times—the vulgar fetish of a sensational people.

In selecting a goose, then, I would first recommend a white bird of medium size. Next let it be white (not yellow) in the skin, the latter being “as chaste as the arm of a maiden when the cold doth cause it to shrink a little and become like unto the breast of a tender gosling bereft of its down.” If a goose is meaty and firm, as it ought to be, and not coated with a super-abundance of useless fat, its breast should require no pressing nor flattening, and those tell-tale finger-marks which indent the carcase of gross specimens, as though it were a bladder of lard, will be absent. But the paterfamiliar out to buy a goose, and who has a wholesome respect for his digestion and that of his dependants, will go still further in his scrutiny. He will avoid those monsters whose “waistcoats” are distended with the fat of a too generous feeding. He will turn the birds over and pass by all those which display heavy layers of yellowy fat along their backs. For this excess of fat is utterly useless—save for shooting boots and embrocation. It melts away in the cooking, after unduly saturating the carcase, and the astute house-wife realises that to pay tenpence a pound for all this blubber which she does not want is bad policy. As for the good man who suffers from it, it is buying a stick to beat his own back.

But the Christmas goose, as I have suggested, need not be the repulsive object it so often is. The public are probably, to some extent, to blame for its present condition, but the feeders also, very naturally, like to make their birds as heavy as possible, seeing they are sold by weight. The great mistake, from a consumer's standpoint, in fattening geese is this: They are given too much fat-forming and too little flesh-forming food. All water-fowl put on fat naturally. They secrete it as protection against cold to a far greater extent than do other birds. Therefore, when they are given a fattening diet, they quickly become gross. In feeding geese for the best results in flavour, flesh and digestible

properties, I would bar all such foods as maize and barley, whole or ground, and boiled potatoes, all of which are largely used by our goose rearers. Wheat might be also included in the list, but, on account of the cost, it is seldom used. The finest French geese, which are, perhaps, the best in the world, are fed on buckwheat placed in troughs of water. This produces white flesh of excellent flavour and very little fat. But white oats, fed in the same way, will yield equally good results. Though geese may call for the exercise of some patience in getting them to take it, buttermilk, used with the oats instead of water, is an excellent thing. There is also a disposition on the part of our fatteners to confine their birds too closely as Christmas approaches. This again is a mistake for it leads to plethora and the lack of that flavour which is inseparably connected with the goose which is permitted to graze—the flavour, in fact, which is its own.

GEES FOR FARMERS.

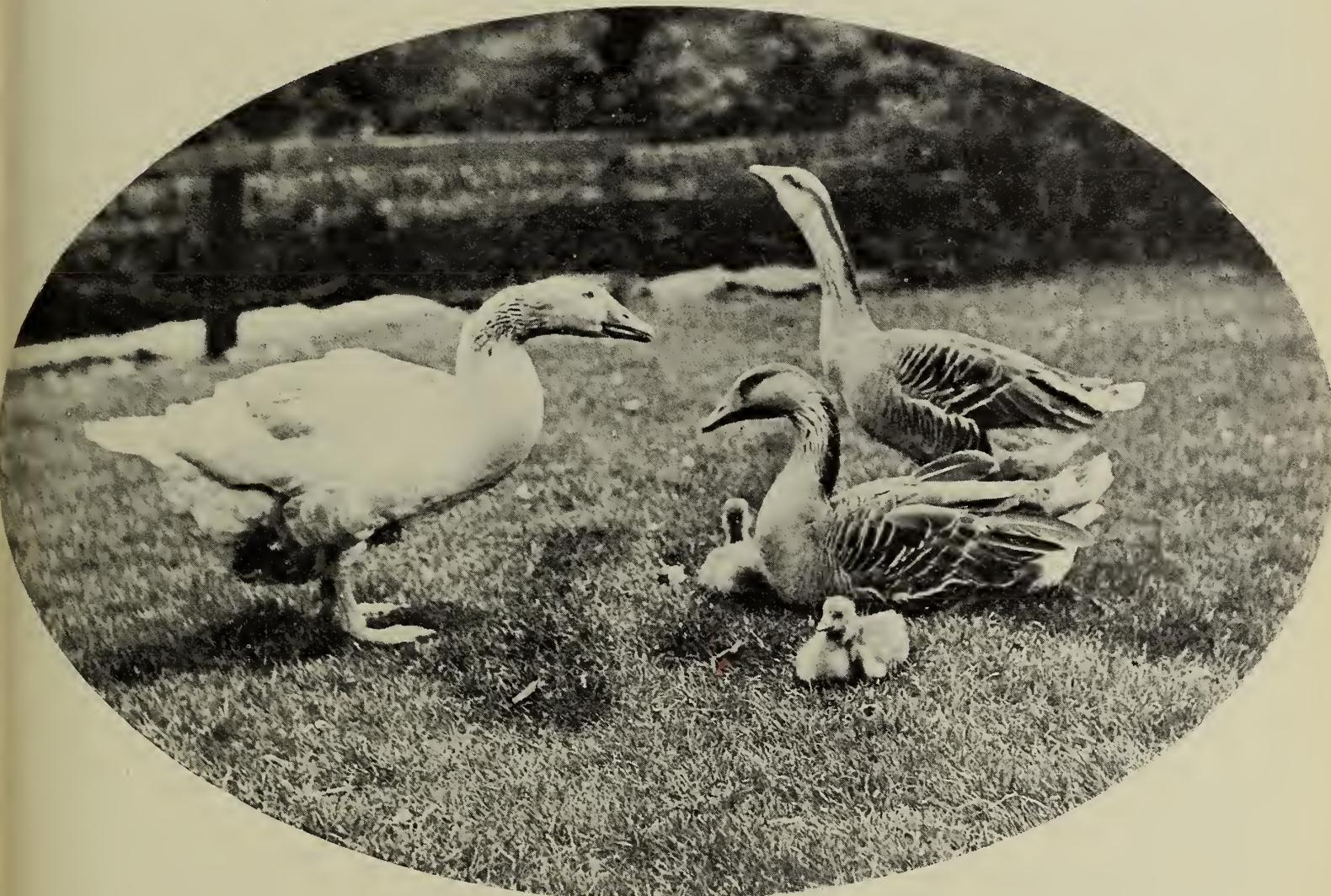
By FRED. W. PARTON (*the University Leeds.*)

THE principle geese rearing counties in England are Lincolnshire and Norfolk, and there is no doubt that the local conditions are eminently suitable, which is proved by the perfect specimens produced by these two counties. There are, of course, many other counties where geese are extensively reared, but there is no doubt that they are not bred to the same extent as they were a few years ago. One reason for this falling off is probably due to the fact that the acreage of common land is not so extensive as formerly; consequently this has a limiting effect on production. At the same time there are thousands of acres of uncultivated land in this country that might be turned to profitable use in this direction.

The breeding of geese is essentially work for the large farmer since these birds should not be reared upon a restricted area, or the land will rapidly become contaminated. They are not suitable for the small-holder to rear in sufficiently large numbers for them to be a profitable adjunct to other branches on his holding. If, however, he can have access to any waste land, on which they may graze, they would be only on his farm during the early stages in their growth and when they are brought under cover in November to fatten for Christmas trade, this alleviates the continual occupation of the land. Under these circumstances if the small farmer sees an opportunity of rearing a few geese without them displacing anything else, then there is no reason why a limited number should not be kept. Speaking generally, however, it is the extensive and not the intensive man who should farm geese, and even then they should not be run too thickly on the land.

Geese may be regarded as one of the most profitable of all branches of poultry, because the demand is considerably greater than the supply, so much so that large numbers are imported every year from Holland and elsewhere. To obtain the full benefit that is possible from geese they must, of course, be treated from the very commencement in an orthodox manner, and become part of the systematic work of the farm. The parent stock should be large in frame and fully matured, but they must not be fat, this is detrimental to a good stock getter. This may be prevented by allowing them perfect freedom. They will then exercise their natural desire for grazing, which will keep them in

type, such as Plymouth Rocks, Orpingtons, and Dorkings, these will comfortably cover five eggs. If the goose becomes broody later in the season she may be allowed a batch of eggs. When the eggs are set under hens, a moist place should be chosen, if there is difficulty in securing such a position without running risk of thieves, or undue exposure; the eggs must be moistened by pouring water underneath the nest. The moisture will then ascend to the eggs, thus being absorbed from the atmosphere which is preferable to sprinkling water directly on to the eggs. When the goslings are hatched they should be left in the nest until they are quite dry. A mistake is often made, even by



Toulouse Geese : the variety for Christmas.

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breeding condition. A good vigorous gander may be allowed three geese, and they should be mated about the third week in December. They will thus have time to grow accustomed to each other, and eggs may be depended upon as fertile when the geese commence to lay in February. The grey goose rarely becomes broody, but the White variety may be entrusted with a clutch, although she is not a very ardent sitter. This, however, is largely a question of the individual bird, and also the strain. We have known some Embdens most persistent sitters, while others show no inclination in this direction. The eggs should be removed from the nest as they are laid and given to hens of large

those of some experience, by removing the young goslings immediately they are free from the shell; there should be no hurry in taking them from their snug quarters, since every hour they remain they are gaining strength. Goslings differ from chickens because they require very little brooding, and it is wonderful how quickly they can look after themselves, at the same time there are several points in their management that are absolutely necessary if they are to develop into strong and hardy birds. It is with goslings, exactly the same as with more delicate fowls, almost entirely their early treatment that determines their future value. When they are taken from their nest they should be placed with

the hen in a large and roomy coop. It is very important that this should not have a wooden floor, for not only is this bad for their legs but the floor very soon becomes objectionable. The youngsters should remain with the hen for seven or eight days. After that they may be put into a shed, which should be thickly littered with straw, frequently turned and renewed immediately it is needed, the time for renewal very soon becomes apparent. When they are about a fortnight or three weeks old they may be driven to pasture land, and if in small numbers they will considerably improve the grass. The manure from geese is of very small value compared with that of hens, but has the beneficial effect of destroying the parasitical fungus found on the seeds of certain grasses which are injurious to cattle, but has no effect on goslings. If their days are spent in grazing, they do not require much more food than they obtain for themselves. In the morning barley meal and middlings made into a stiff paste is a good meal. This may be varied by scalded wheat dried off with ground oats. They must always have plenty of green food and this they obtain for themselves when they are at liberty. Freedom and this method of treatment may be continued right up to the time when they are shut up to undergo the final preparation for Christmas.

BEST BREEDS OF GEESE.



WHILE the farmer has not the same latitude in his selection of geese, as he has in the selection of his hens, yet there is offered to him breeds that will meet every market requirement. The chief varieties, and those that appeal most strongly to the ordinary farmer, are the Toulouse and the Embden, both of which have qualities that fully justify their popularity. At the present time geese are in great demand for Christmas consumption. Consequently farmers make an effort to supply fat specimens at this particular period of the year. There is, also, another season—Michaelmas—when there is a demand, in a lesser degree for geese known as "green." This is doubtless a lucrative trade when the right breeds are kept, and are treated in a proper manner. They require little or no preparation more than they themselves acquire by access to grazing land and stubbles.

Among the profitable breeds of geese must be placed the Chinese, and this useful breed rarely receives the attention that its economic qualities deserve. It is not kept to any great extent in this country, except by a few who tried it out of curiosity, then retained it after discovering its value. We have known farmers of long experience with the more largely kept Embden and Toulouse, discard both for the more precocious Chinese. There are two varieties of this breed—brown and white—both similar economically. They have

excellent flesh both in colour and texture, and it is much more abundant than is apparent from their appearance, as they are exceptionally small boned. The flesh is also much finer than that of the more commonly kept breeds, even when they are fattened to repletion. So far as their laying powers are concerned, they are considerably more prolific than either Toulouse or Embden. In shape they are upright, and not nearly so deep in body as are the heavier breeds. There is no doubt that the Chinese either pure or crossed with an Embden, produces ideal green goslings, since they mature very rapidly, and the firmness of flesh already mentioned is a favourable quality.

The Toulouse is of enormous size; it is, however, rather slow in its growth, but when it does attain its full maturity, no other breed can compare with it in weight. Its massive proportions at once indicate the tremendous weight which it will reach. In both sexes the head should be very broad and thick, but this is more noticeable in the gander. The beak should be straight and strong from the top of the head without deep indentation where the head ends and the beak begins. The dewlap should be large and hang well down. As a matter of fact every characteristic of the Toulouse is on a massive scale. It is very deep in the keel, well extended in front, with divided breasts, which in well developed specimens almost reaches the ground. The neck should be medium in length, very thick and strong, yet graceful in shape. The colour of the Toulouse should be dark grey on the head, extending to the back, the breast is higher in colour which gradually tones off to white. The legs should show plenty of bone, be very wide apart, and orange coloured.

The Embden or white, in many respects is similar to the Toulouse. The colour, of course, will always be a distinctive mark of difference between the two. The Embden is not so massive in build as the grey, although there are strains that will run the Toulouse pretty closely when both of them are fully grown. They are somewhat deceptive in weight, since their feathers do not grow in the same profusion as those of the grey goose, and they weigh considerably more than their appearance indicates. The Embden is more upright in carriage, the neck is rather longer and the keel is not so prominent as in the grey. The chief economic quality of the Embden lies in its rapidity of growth. It is, therefore, ready for consumption long before the more slowly growing Toulouse. Consequently the Embden supplies the Autumn, and the Toulouse the Christmas trades.

Broken Eggs.

A statement was made at the recent convention of the National (U.S.) Poultry, Butter, and Egg Association at Chicago, that the breakages of eggs on the way to market reaches no less a sum than £15,000,000 sterling every year. Evidently the packing and handling is at fault.

THE SMALLHOLDER'S FIRST YEAR.

BY THE EDITOR.

THE INTRODUCTION TO A NEW SERIES.

The number of persons engaging in farming operations on a more or less limited scale is increasing year by year, and as they stand in a class apart, special and expert knowledge must be theirs if they are to succeed in the vocation they have selected. The majority of people agree that the cultivation and cropping of an area of land, from one to fifty acres in extent, can be rendered lucrative, if certain essential factors are present. The chief of these are a suitable location, good soil, favourable climatic conditions, and a willing worker possessing the necessary knowledge.

To assist those who are contemplating taking a smallholding we propose to publish a series of 12 articles dealing with the various aspects of the case. We are, however, confronted right at the outset, with a serious difficulty. The articles, to be of any service whatsoever, must be in sequence, but two points have here to be taken into consideration. In the first place we must take into account the erection of buildings, permanent and otherwise, and in the second place, the work upon the holding. We have found in formulating our scheme that these two branches of the work clash at certain periods, but we believe the final order of the articles, given below, is the best that can be followed.

There is little doubt but that the principal endeavour in the first place should be to get the land under a crop, whether poultry or a fixed crop, as soon as possible, so that some return may be expected during the first six or eight months. We cannot, of course, in the compass of twelve monthly instalments, discuss subjects outside poultry-keeping, excepting inasmuch as they can be reckoned as adjuncts to this branch of agriculture.

Before operations can begin a site must be secured, and there are many points to be considered in this connection. The nature of the soil, whether suitable for poultry or not; drainage; accessibility for marketing purposes; and finally its geographical position as regards climate. These and other features we propose to discuss in the first article, namely, in January, 1914.

Since it is a mistake to sink too much capital in the poultry yard, it is usually advisable, especially when operations are begun at the New Year, to breed up the necessary stock. This can be accomplished by buying eggs for hatching and day-old chicks. These must be hatched and reared in the spring, and therefore

the February instalment will be devoted to this question.

The advice given in February will help the smallholder over the next six to eight weeks; hence we will deal in March with the whole question of where to live. The subject of cheap bungalow building will be fully discussed, and many points of interest given which will bring a wide subject into a small compass.

There are many side lines to ordinary poultry-keeping, so the April number will contain a few particulars as to the place of ducks, turkeys, bees, market gardening, and fruit growing on a smallholding. The last mentioned subject will be dealt with more fully in the September issue, as that is the season for planting fruit bushes.

By this time the earlier chickens will be free from the brooders, hot and cold, and, therefore, in May and June we will have something to say as regards the erection of houses—permanent and portable—and runs. In addition we will give the latest information relative to the various methods of housing—intensive; in semi-confinement; at liberty; and on the American colony system.

When we deal with chicken rearing in the February instalment, details will be given as to feeding the young birds until five months old, therefore, by July particulars will be required as to the feeding of laying pullets. This subject will be regarded not only from the point of view of successful feeding, but also economical feeding, and we believe the remarks we shall have to make then will be instructive and valuable to our readers.

By the time August comes round poultry-keepers begin to think of eggs, since the most forward of the young stock will be only a few weeks from laying. This instalment will be devoted to a description of the internal fittings of the houses, such as trap-nests, feed-hoppers, fountains, perches, etc.

As we have remarked above, in September one's thoughts turn to the planting of fruit bushes, etc., and hence a comprehensive article on this subject will be published in that month's issue.

During October a few eggs may be laid and these must be handled in a business-like way, and so for that month we have selected the question of marketing. Full details will then be given relative to the successful sale of the produce.

In the early history of any smallholding the amount of produce to be disposed of is

necessarily small, and undoubtedly, to overcome the difficulty of high freight rate and consequently small returns, an instalment will appear in November dealing with co-operation motor transit.

The first year is nearly over, but instead of spending too much time reviewing the past, excepting inasmuch as the lessons learnt will help in the future, we must look forward to 1915. For this reason the December article will hold a store of information respecting the next year's work.

We have arranged for this series as we firmly believe that the particulars we shall be able to lay before our readers—gathered from all sources and a variety of writers—will be of the utmost help to those who are newly taking up

the cultivation of land as a means of livelihood.

In brief the titles of the articles making up the series are:—

- | | |
|-------|--|
| Jan. | Selection of a site. |
| Feb. | Hatching and rearing. |
| March | The smallholder's bungalow. |
| April | Side lines to poultry-keeping. |
| May | Permanent and portable houses and runs. |
| June | " " |
| July | Purchase of foods and methods of feeding. |
| Aug. | Trap nests, feed hoppers, and internal fittings. |
| Sept. | Fruit growing as an adjunct to poultry-keeping. |
| Oct. | The secret of successful marketing. |
| Nov. | Co-operative motor transit. |
| Dec. | Selection & mating for the breeding season. |

A POULTRY FARMER'S ACCOUNTS.

By J. STEPHEN HICKS.

TO the average man who is not a dweller in cities the mention of the word accounts calls to mind unpleasant thoughts of muddled figures—thoughts which he generally finds it convenient to shelve with as little delay as possible. Those of us, however, who belong to the modern genus of poultry-farmer have to live up to a higher standard of things than the above in the matter of our book-keeping, and though this standard need not be that of a London merchant, it should be an accurate—if simple—one.

A modification of the double entry system is the best one to employ, for this system is self-checking. Let us first consider the books necessary; these are four—namely, a day-book, a cash-book, a journal, and a ledger; now we will take them one by one. Any rough diary, exercise book, or the like will do for the day-book, in which must be entered brief details of anything and everything that occurs in the way of a cash or credit transaction during the day. Receipts and payments out, no matter how trifling, should all be put down, and particular attention given to entries of goods bought or sold without payment, because it is from this day-book that bills will have to be checked or made out later on; it is not proposed to carry such entries further on through the books, as of course would be done in strict book-keeping. Just by way of illustration we will take a day's entries from an imaginary breeder's book—he is, by the way, the possessor of a pig or two, and runs one or two other side lines.

"October 15th. Recd. cockl., Hart, 15/-; two hens, Burgess, 21/-. Dispatched 120 eggs, Harris, @ 1/10 (unsettled). Stamps, 2/-. Tip, carter, 2d. 3 sacks pollard arrived @ 9s. Paid Abbot, 2 days, digging potatoes, 5/-. Sold Burt 2 gilts, 35/- each (pd.)"

Every Saturday night, let us suppose, the poultry farmer sits down to balance his cash and enter up his cash book. As the name implies, none but actual cash transactions are to be entered in this book, and before making any entry, he has to decide under which account it is to go; he does not want to be encumbered with a multitude of different ones, and on the average place there should be no need for any more than Stock, Eggs, Food, Household, Shows, Appliances, Wages, Carriage, Advertisements, Bank, Pigs (or other side lines), Personal, and General Accounts. All receipts will be entered on one side, and payments out on the other side, of the cash book, and for the purpose of these double entry accounts all cheques drawn must be regarded as money received (from the Bank) and thus entered on the cr. side, while, similarly, all cheques, etc., paid into the bank will appear as a debit (since they pass away from the cash-box). Thus, when the cash book is being made up weekly, the poultry-farmer has only to refer to three places—his cheque-book, his paying-in book, and his day-book; he should detail the cheques drawn during the week on the credit side, under the heading "Bank of —" and then proceed to set the various amounts out on the other side under the different headings to which they belong; thus cheque No. A. 94355—£4 10s.—on the Cr. side might appear on the Dr. as Wages Account £2; Household Account £2; General Expenses 10s. Having exhausted the entries in the day-book, after finishing with the cheques, nothing remains but to test the balance. This is a very simple matter and merely consists in deducting the Dr. total from the Cr. in the cash book, when the difference should be found in the cash-box in the form of cash or paper money, or both, and unless this is exact there is some error in the entries which must, of course, be rectified at once. The Dr. total can never exceed the Cr. unless the cash-box (as it

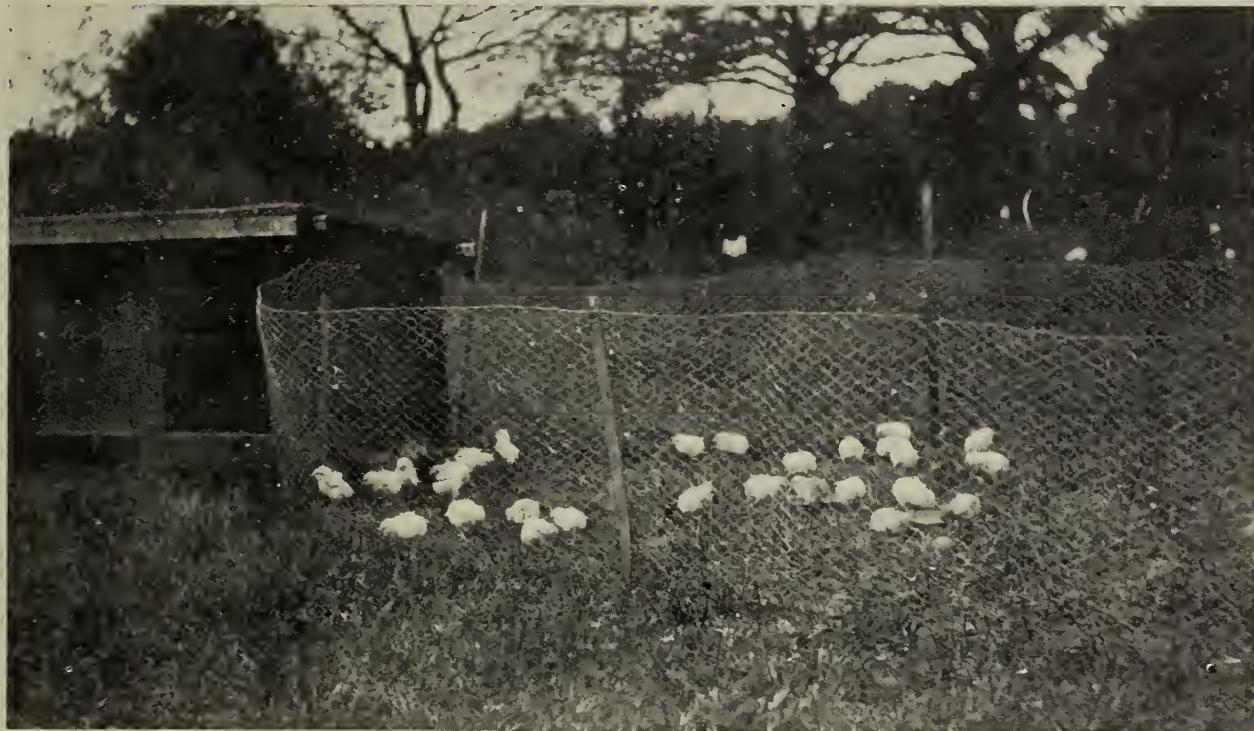
were) owes somebody money, at the time the account is being balanced. At the end of each month there will no doubt be a balance between the two sides which must be carried on to the next month.

We now come to the journal ; this book, at any rate, in our case, belies its name, for it is only to be entered up once a month. All the entries on both sides of the cash book for the month (excepting the balances) must be grouped together under their respective headings (on a separate slip of paper first for convenience), and they will then be entered separately on one side of the journal, while their total, representing the cash turnover for the month,

position of things right in the cash book. In order to make this clearer, supposing you have bought wheat from a farmer and sold him six cockerels for stock, you probably deducted the value of the birds from his bill when settling, and the cheque drawn for the balance is the only item that appears in the cash book. The value of the cockerels being, say, £2, the following entry must be made in the journal :

| | |
|--------------------------|--------|
| Food account ... | £2 0 0 |
| Dr. to Stock account ... | £2 0 0 |

(6 cockerels against W. Smith's wheat, Oct., 1913).



A December Brood.

[Copyright.]

These birds will be very valuable in the early spring, when table chickens are in such great demand.

appears on the other. Thus supposing the Cr. side of the cash book totals £95 for the month we might enter something like the following in the journal.

| | |
|-----------------------------------|---------|
| Cash account ... | £95 |
| Dr. to the following a/cs., viz., | |
| Stock account ... | £45 0 0 |
| Eggs " | 25 0 0 |
| Shows " | 10 0 0 |
| Pigs " | 10 0 0 |
| Personal " | 5 0 0 |

and of course the Dr. side must be dealt with in the same way, the total of the cash being this time on the right instead of the left hand side, and the various accounts also transposed.

The journal is also to be used for all other entries necessary for squaring up various accounts in which there may have been no entry to set the exact

Again, unless all eggs and birds consumed in the house are paid for at the time by the house-keeper, strict account of their value must be kept and the totals for the month entered in the journal as follows :

| | |
|--------------------------|---------|
| House account ... | £2 10 0 |
| Dr. to Stock account ... | £1 0 0 |
| ,, Eggs account ... | 1 10 0 |

(Seven birds and 200 eggs given out to house, October, 1913).

Similarly, supposing pigs are kept on the farm, they naturally consume a certain amount of meal and bran which it would be very difficult to keep distinct from the fowl's supply. A calculation must therefore be made at the rate of, say, 2/6 per sow per week, and in order to find out the true

profit on the pigs, the following journal entry must be made.

| | |
|--|------------|
| Pigs account | ... £2 0 0 |
| Dr. to Food account | ... £2 0 0 |
| (4 Sows at 2/6 a week during October, 1913.) | |

This brings us to the last, and perhaps the most important book—the ledger; in this book each account has a separate set of pages devoted to it, which can only be posted up from the journal (the folio numbers of the ledger accounts, by the way, should always be entered up in the journal when posting them). Of course, an entry on the Dr. side of the journal will always be posted into the Dr. side of the ledger, and *vice versa*. In this way, when the books are entered up-to-date, you have only to turn up the various folios in your ledger, deduct the lesser total from the greater in any particular account, and the difference will be what you have made, or paid away as the case may be. As an example, here is an imaginary page in the ledger:

STOCK ACCOUNT.

| | Dr. | £ s. d. |
|-----------------------------|-------------|---------|
| 1913. Jan. To cash (19) ... | ... 10 6 | |
| 1913. Jan. By Cash (19)... | ... 29 7 6 | |
| " " House a/c (19) | ... 1 0 0 | |
| Feb. " Cash (20)... | ... 31 10 9 | |
| " " House a/c (20) | ... 15 0 | |

Thus, if at the end of February you want to know what you have made in sales of stock, you deduct 10/6 from £62/13/3 and find the net result is £62/2/9. The figures in brackets refer to the page of the journal from which the entry was taken. At the end of each year the balances of all the accounts must be ‘struck,’ and all the credit balances added together will exactly equal the total of the debit balances, otherwise there has been a mistake in casting or posting which must, of course, be rectified, even if it only amounts to a penny.

In order to arrive at a correct balance sheet for the year a considerable amount of calculation is necessary, for, of course, *all* expenditure and receipts are not probably on the farm’s account. Rent, for example, is no doubt paid in one sum—*inclusive* of the dwelling house and garden—similarly with rates and taxes.

We cannot do better than draw up an imaginary balance sheet to illustrate what is meant:

| | Dr. | £ s. d. |
|-------------------------------|-------------|---------|
| To Rent Account | ... 22 0 0 | |
| " Rates | ... 5 0 0 | |
| " Food | ... 136 9 4 | |
| " Carriage | ... 60 5 2 | |
| " Wages | ... 52 0 0 | |
| " Advertisements | ... 82 10 6 | |
| " Stationery | ... 10 11 9 | |
| " Appliances | ... 40 3 6 | |
| " (allowing 10% depreciation) | | |
| " General | ... 20 19 5 | |

| | |
|---------------------------------------|------------------|
| „ Interest on Capital (5% on £500) | ... 25 0 0 |
| Balance, profit | ... 32 5 3 |
| | <u>£487 4 11</u> |

| Cr. | £ s. d. |
|---|------------------|
| By Stock Account | ... 295 16 8 |
| " Eggs | ... 87 2 4 |
| " Pigs | ... 22 16 5 |
| " Fruit | ... 11 17 6 |
| " Bees | ... 2 10 3 |
| " Shows | ... 5 5 0 |
| " Judging | ... 16 6 0 |
| " Commissions and various | ... 15 10 9 |
| " Improvement on valuation of all stock | ... 25 0 0 |
| | <u>£487 4 11</u> |

The fact of the balance being so insignificant is quite immaterial, figures having been put down at random.

THE BLEACHING OF FANCY FOWLS.

To the Editor of THE ILLUSTRATED POULTRY RECORD.
Sir,

Your correspondent “A Non-Exhibitor” seems to take a very gloomy, and I think erroneous idea of this subject. If bleaching is practised at all in England, it is quite exceptional and not the rule. At the last Haywards Heath Show, there were certainly no bleached birds, and now that the White Orpington Club has altered the standard to 30 points for “Type” and only 20 for “Colour” there is no incentive for anybody to attempt to bleach their birds, as an extra white one would stand no chance against a moderately white bird of true “Orpington Type.”

Again, if bleaching is practised, how is it that there are always so many “Sappy” birds at the Dairy Show? When these same birds have been reared a little longer they appear again at the later shows, quite a good colour. Your correspondent is quite in error when he says “Those who are breeding White Orpingtons or have bred them must know that it is the exception rather than the rule for even the best matings to produce a large percentage of really pure white male birds.” I deny this statement in toto. I know personally many fanciers who having a good “white strain” find no difficulty in breeding good white cockerels as well as pullets. I have at the present time a 1912 cockerel well advanced in his moult and in both old and new feathers there is not a trace of sappiness. All are of perfect whiteness.

Yours, etc.,

FREDERICK CHATTERTON,
Maidenhead.

DR. RAYMOND PEARL'S INVESTIGATIONS INTO THE FECUNDITY OF FOWLS.

SUMMARY AND DISCUSSION OF RESULTS.

(continued from page 71, November, 1913).

THE FACTS AND THEIR INTERPRETATION.

 In this paper is presented a detailed analysis and interpretation of a rather extensive series of data regarding the inheritance of fecundity in the domestic fowl. The basic data are derived from trap-nest records extending over a period of years. They include records from (a) pure Barred Plymouth Rocks; (b) Cornish Indian Games; (c) the F_1 individuals obtained by reciprocally crossing these two breeds; and (d) the F_2 individuals obtained by mating the F_1 's *inter se* and back upon the parent forms in all possible combinations. The fully-pedigreed material made use of in this present paper includes something over a thousand adult females, each of which was trap-nested for at least one year, and many for a longer period. This material covers four generations. The birds of the fifth generation have just completed their winter records at the time of writing. Besides this fully pedigreed material, the collection and study of which has occupied five years there was available as a foundation, without which the results discussed in this paper could not have been reached, nine years of continuous trap-nest records for Barred Plymouth Rocks, involving thousands of birds, which had been subjected during this long period to mass selection for increased egg production.

Altogether it may fairly be said that the material on which this paper is based is (a) large in amount, (b) extensive in character, and (c) in quality as accurate as it is humanly possible to get records of the egg production of fowls (Pearl 31). On these accounts the facts presented are worthy of careful consideration, and have a permanent value quite apart from any interpretation which may be put upon them.

The essential facts brought out in this study of fecundity appear to me to be the following:

1. The record of fecundity of a hen, taken by and of itself alone, gives no definite, reliable indication from which the probable egg production of her daughters may be predicted. Furthermore mass selection on the basis of the fecundity records of females alone, even though long continued and stringent in character, failed completely to produce any steady change in type in the direction of selection.

2. Fecundity must, however, be inherited since (a) there are widely distinct and permanent (under ordinary breeding) differences in respect of degree of fecundity between different standard breeds of fowls commonly kept by poultrymen, and (b) a study of pedigree records of poultry at once discovers pedigree lines (in some measure inbred of course) in each of which a definite, particular degree of fecundity constantly reappears generation after generation, the 'line' thus 'breeding true' in this particular. With all birds (in which such a phenomenon as that noted under b occurs) kept under the same general environmental conditions such a result can only mean that the character is in some manner inherited.

The facts set forth in paragraphs 1 and 2 have been presented, and, I believe, fully substantiated by clean-cut and extensive evidence, in previous papers from this laboratory. In the present paper it is further shown that:

3. The basis for observed variations in fecundity is not anatomical. The number of visible oöcytes on the ovary bears no definite or constant relation to the actually realized egg production.

4. This can only mean that observed differences (variations) in actual egg productions depend upon differences in the complex physiological mechanism concerned with the maturation of oöcytes and ovulation.

5. A study of winter egg production (taken for practical purposes as that from the beginning of the laying year in the early fall to March 1) proves that this is the best available measure of innate capacity in respect to fecundity, primarily because it represents the laying cycle in which the widest difference exists between birds of high fecundity and those of low fecundity.

6. It is found to be the case that birds fall into three well-defined classes in respect to winter egg production. These include (a) birds with high winter records, (b) birds with low winter records, and (c) birds which do not lay at all in the winter period (as defined above). The division point between a and b for the Barred Plymouth Rock stock used in these experiments falls at a production of about 30 eggs.

7. There is a definite segregation in the Mendelian sense of the female offspring in respect to these three fecundity divisions.

8. High fecundity may be inherited by daughters from their sire, independent of the dam. This is proved by the numerous cases presented in the body of this paper where the same proportion of daughters of high fecundity are produced by the same sire, whether he is mated with dams of low or of high fecundity.

9. High fecundity is not inherited by daughters from their dam. This is proved by a number of distinct and independent lines of evidence, of which the most important are: (a) continued selection of highly fecund dams does not alter in any way the mean egg production of the daughters (26, 27, 28, 30, 34, 35, 36, 37); (b) the proportion of highly fecund daughters is the same whether the dam is of high or of low fecundity, provided both are mated to the same male; (c) the daughters of a highly fecund dam may show either high fecundity or low fecundity, depending upon their sire; (d) the proportion of daughters of *low* fecundity is the same whether the dam is of high or of low fecundity provided both are mated to the same male.

10. A low degree of fecundity may be inherited by the daughters from either sire or dam or both.

11. The results respecting fecundity and its inheritance stated in paragraphs 3 to 10 inclusive are equally true for Barred Plymouth Rocks, Cornish Indian Games, and all cross-bred combinations of these breeds in F_1 and F_2 ¹⁶.

The above statements are of definite facts, supported by a mass of evidence. Their truth is objective and depends in no way upon theory of inheritance whatsoever. With this clearly in mind we may undertake their interpretation.

It is believed that these general facts, and the detailed results on which they are based, are completely accounted for and find their correct interpretation in the simple Mendelian hypothesis respecting the inheritance of fecundity in the fowl, which was outlined at the beginning of this paper, and has been checked against the detailed data from each mating. This hypothesis involves the following points, each of which is supported by direct and pertinent evidence derived either from physiological and statistical studies of fecundity, or from the detailed data respecting the mode of inheritance of this character.

It is assumed in this hypothesis that:

i. There are three distinct and separately

¹⁶ This is true, of course, only for certain gametic types of low fecundity females, as will be clear to anyone who has studied the detailed evidence. This limitation, however, in nowise diminishes the force of this particular evidence in favor of the conclusion standing at the beginning of paragraph 9.

¹⁷ And F^3 . It has not been thought wise to delay publication of this paper any longer in order to include the data for F^3 . It may be said, however, that they are in full accord with those which have been obtained from earlier cross-bird generations and the parent forms.

inherited factors upon which fecundity in the female fowl depends.

2. The first of these factors (which may be called the anatomical) determines the presence of an ovary, the primary organ of the female sex. The letter F is used throughout to denote the present of this factor.

3. There are two physiological factors. The first of these (denoted by L_1) is the basis physiological factor, which when present alone in a zygote with F brings about a low degree of fecundity (winter record under 30 eggs). This factor is under no limitations in gametogenesis but may be carried in any gamete, regardless of what other factors may be also present.

4. The second physiological factor (denoted by L_2) when present in a zygote together with F and L_1 leads to a *high* degree of fecundity (winter record over 30 eggs). When L_1 is absent, however, and L_2 is present the zygote exhibits the same general degree of fecundity (under 30) which it would if L_1 were present alone. These two independent factors L_1 and L_2 must be present together to cause high fecundity, either of them alone, whether present in one or two 'doses,' causing the same degree of low fecundity.

5. The second physiological factor L_2 behaves as a sex-limited (sex-correlated or sex-linked) character, in gametogenesis, according to the following rule: the factor L_2 is never borne in any gamete which also carries F . That is to say, all females which bear L_2 are heterozygous with reference to it. Any female may be either homozygous or heterozygous with respect to L_1 . Any male may be either homozygous or heterozygous with reference to either L_1 , L_2 or both.

How well this hypothesis agrees with the facts has been shown in detail in the preceding sections. By way of summary the following table shows the accord between observation and expectation for all matings of each general type taken together. For reasons set forth below,

TABLE 33.
Showing the observed and expected distributions of winter egg production for all matings taken together.

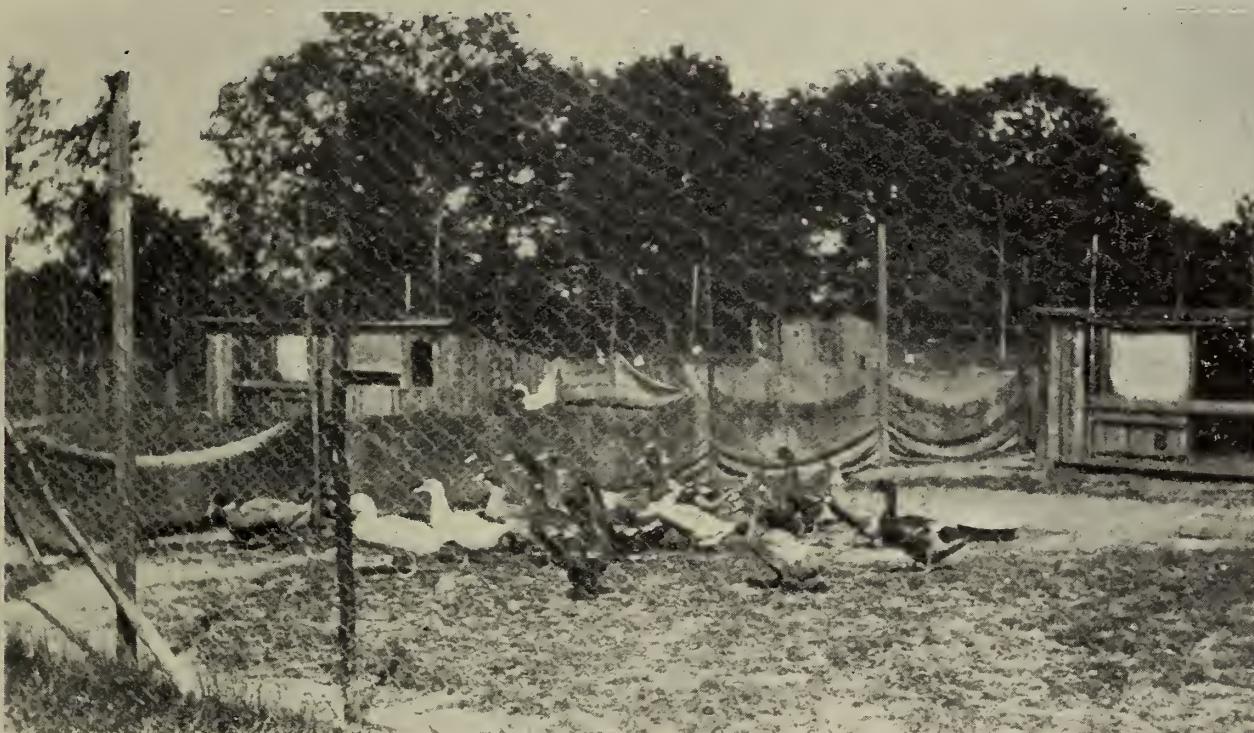
| MATING | WINTER PRODUCTION OF DAUGHTERS | | | |
|---|--------------------------------|------------|-------------|-------|
| | Class | Over 30 | Under 30 | Zero |
| All B P R × B P R ... { | Observed ... | 365½ | 259½ | 31 |
| | Expected | 381.45 | 257.25 | 17.30 |
| All C I O × C I G ... { | Observed ... | 2 | 23 | 15 |
| | Expected | 0 | 25 | 15 |
| All F_1 { | Observed ... | 36 | 79 | 8 |
| | Expected | 26.5 | 88.75 | 9.75 |
| All F_2 & back-crosses ¹ { | Observed ... | 57½ | 98½ | 23 |
| | Expected | 68.60 | 95.00 | 15.40 |

¹ With exception of the matings of C.I.G. ♂ 578 m Barred F_1 ♀ ♀

the lumped figures do not give an altogether fair estimate of the matter, but some sort of a summary is necessary.

Considering the nature of the material and the character dealt with it can only be concluded that the agreement between observation and hypothesis is as close as could reasonably be expected. The chief point in regard to which there is a discrepancy is in the tendency, particularly noticeable in the B.P.R. \times B.P.R. and the F_2 matings, for the observations to be in defect in the 'Over 30' class and in excess in the 'Zero' class. The explanation of this is undoubtedly, as has been pointed out in the

rejected, but have been entered in the tables and then discussed in the accompanying text. Whether this is accounted a justifiable procedure or not will depend upon one's point of view in some degree. The investigator is usually expected to reject abnormal material. But in view of the rather hysterical attacks upon geneticists and their method of work now becoming so fashionable in this country, if for no other reason, it seems best to follow the plan of publishing all the data. The opponents to the views which underlie the Mendelian interpretation here advanced are quite welcome to make as much capital as they are able to out of



A Flock of Mixed Ducks on a Bedfordshire Smallholding.

[Copyright]

body of the paper, to be found in disturbing physiological factors. The high producing hen, somewhat like the race horse, is a rather finely strung, delicate mechanism, which can be easily upset, and prevented from giving full normal expression to its inherited capacity in respect to fecundity.

In order to forestall any possible charge of manipulation of the data to support a particular hypothesis of all the figures (with the exception of 7 birds discussed, and the F_2 mating of ♂ 578) have been entered throughout exactly as they stood on the original books of record. That is to say, some birds known to be physiologically abnormal or pathological have not been

the discrepancies between observation and theory in the several tables. It seems only fair, however, to ask that a judgment of the adequacy of the hypothesis be not formed from this summary table 33, but instead from the detailed data in the body of the paper.

Possible criticisms.

In consideration of the fact that this paper constitutes one of the first attempts to apply a Mendelian interpretation to the facts regarding the inheritance of an economically productive character of an animal, and in view of the possible application of the results or the methods of this paper to other productive characters of other organisms, it is important to examine carefully

and critically the nature of the evidence and the objections which may be brought against the conclusions. In the first place it is important to note once more that the data and their interpretation are kept separate throughout, and that the value of the former is not lessened if the latter is later found to be completely invalid, or in need of modification. It is scarcely necessary to say that the Mendelian hypothesis here presented is the only simple one which the writer has been able to discover, after over two years of study directed (whenever the time was available) towards this particular end, which is capable of accounting satisfactorily for all the facts. Very many other Mendelian schemes for the inheritance of fecundity have been tested against the facts in the course of the work and discarded, one by one, because inadequate. Of course, it still remains quite possible, though perhaps not very probable, that there may be an even simpler hypothesis which will equally well or better account for the facts. If so, by all means let us have it. But in the meantime, it may be fairly be said, that the hypothesis here presented brings together under a few, symbolically simple, general statements a wide range of very diverse and complex facts of inheritance.

The strongest general evidence that the Mendelian hypothesis here presented is at least a close approximation to the truth in respect to the inheritance of a fecundity in the fowl is found in the fact that it accounts equally well for so wide a range of diverse phenomena. In the two 'pure' parent races, one of generally high and the other of generally low fecundity; the two reciprocal crosses; and the twelve different kinds of matings in F_2 , we have a series of really independent measures of the validity of the hypothesis. It accords with the facts in all but one (the matings of C.I.G. ♂ 578 with Barred F_1 ♀ ♀) of all of the different types of matings tested. The one exception probably has a physiological explanation. In view of these facts the cumulative probability that the hypothesis applied represents at least a reasonable approximation to the true interpretation of the results becomes very great.

A possible criticism of the whole method of this investigation might be found in reference to the measure of fecundity which has been used throughout, namely, the winter egg production. Regarding this matter it should be said that the very reason why winter egg production was adopted as the unit of measure in all of the fecundity work of this laboratory was because a thorough biometrical and physiological study of egg production in fowls proved

beyond question that winter production was the best practicable index or measure of a fowl's innate or constitutional capacity in respect of fecundity. The reasons for this conclusion have been set forth in this and former papers from the laboratory and need not be repeated *in extenso* here. The most significant of them is that the differences in observed production between individuals of different innate fecundity capacities are relatively greater in respect of winter productions than of any other time unit that can practically be employed in the measuring of this character. To suppose, however, that the results set forth in this paper depend for their existence upon the use of this particular time period of production as a measure of fecundity has no warrant in fact. Precisely the same results (in principle) would be obtained if yearly production records were used in the analysis. During the whole of this work complete yearly records have been kept and have been studied. They show in every essential particular the same kind of results as those of this paper. There are objections to the use of the year as a unit of measure, however, which may not be obvious to one inexperienced in these matters. In the first place, it is very much more difficult to keep large flocks of hens in normal, and healthy physiological condition over a whole year period than over a shorter period. Again the risk of an accident (say the use of bad feed or something of the kind) occurring and upsetting the birds physiologically and coincidentally rendering their fecundity records abnormal and in greater or less degree useless, is increased just in proportion as the time unit is increased. Further the year period includes as a too dominant feature, the spring egg production. The production during the months of March, April and May is practically worthless (and has long been so recognised by experienced poultrymen) as an index or measure of the true, innate or constitutional fecundity capacity of the individual. During these months (in northern latitudes) all hens which are not diseased, malformed, infantile or senile, lay anywhere from 'well' to 'very well.' There is relatively little difference between the most and the least fecund at this season. This period is therefore worthless as a measure of fecundity, and its inclusion in any longer period makes that by so much the less valuable as a measure.

In view of all these considerations it seems certain that the results obtained are not open to criticism on the ground of the time unit used as a measure of fecundity.

(To be concluded in the January issue).

FANCIERS AND FANCY MATTERS.

BY WILLIAM W. BROOMHEAD.

MAJOR H. M. BARNES'S POULTRY.

AFTER judging at Hadleigh (Suffolk) Show recently I had the pleasure of meeting Major H. M. Barnes; and having three or four hours to wait for the next up train from that little town I was delighted to receive a kind invitation to motor over to Ipswich and fill in the time. I was thus enabled not only to get to London much earlier but to have a brief look around the excellent poultry establishment that Major Barnes has at Stoncroft, Ipswich. As readers of the *ILLUSTRATED POULTRY RECORD* are doubtless aware, Major Barnes is no novice in the Fancy, and many hundreds of prizes have been won by his birds. He specialises in three breeds, keeping Blue, Black, Buff, White, and Cuckoo Orpingtons, White, Silver, and Partridge Wyandottes, and Blue Langshans, while recently he has added Blue Orpington ducks to his collection.

Although my inspection was brief I was able to get a good idea of how things are done at Stoncroft, and I am not surprised at the fine specimens which Major Barnes breeds and exhibits, since the whole establishment is an ideal one. Everything is done for the comfort of the birds, while the situation of the runs is such that guarantees hardy stock. The fowls I saw were in remarkably good condition, while among this year's produce are many chickens of great promise, so the 1913 show season should be a good one for this popular fancier.

MISS R. B. BABCOCK'S BIRDS.

Miss Babcock claims to be one of the largest and most successful breeders and exhibitors in England of certain breeds of poultry, and it is only necessary for one to glance through some recent show reports to verify this statement. When she exhibits her



A Pen of the famous Barbu D'Uccle Bantams. [Copyright] birds she does so in a whole-hearted manner, and many a big team leaves the famous Chigwell Row yards in the season to do the rounds in charge of her Manager, Mr. G. Springett. Already she has well over 7,000 prizes (including challenge cups) to her credit, and of such high quality is her stock

that the number will be largely increased ere this season closes.

The breeds which Miss Babcock keeps at the Grange Hill Prize Poultry Yards are Old English Game, Andalusians, Barred Plymouth Rocks, Black also White Leghorns, White Orpingtons, White Wyandottes, Dark Dorkings and Indian Game, besides Old English and Indian Game and variety



On a Belgian Fancier's yard, where some exceptionally fine birds are reared. [Copyright.]

bantams. As an example of the teams which Miss Babcock exhibits I may mention that at a recent show she entered nineteen birds, and the prizes won by them were six specials (one for the best heavy breed fowl in the show) eight firsts, four seconds, and two thirds, while of the other five birds, one was reserve, one very highly commended, one highly commended, one commended, and the other, a Leghorn, not noticed.

The small man may say that such teams as these spoil competition and that no exhibitor should be allowed to take so many prizes at one event. With this, however, I do most emphatically disagree, since competition is open to all; and I know of more than one so-called small fancier, who has bred and shown birds which have gained high positions in the prize lists in some of the strongest competitions. It must not be forgotten that the up-keep of such a large establishment as Miss Babcock's is an enormous one, and that the actual money won by her birds in no way pays for the whole of the expenses connected with it. In addition to the Grange Hill Yards this well-known lady fancier runs another farm at Chigwell Row, Essex, namely the Hainault Utility Poultry Farm, at which she breeds some splendid laying strains.

MR. W. J. GOLDING'S BUFF ORPINGTONS.

To be able to breed a fowl which can gain the champion prize at one of the few classic events of

the season is an achievement of which any fancier would be justly proud. It is, therefore, with great pleasure that I am able to congratulate Mr. W. J. Golding on accomplishing such a feat, and at no less a fixture than the Dairy. I had the honour of awarding the bird, a Buff Orpington Cockerel, first prize in his class of fifty-two entries and the Buff Orpington Club's Challenge Cup for the best bird of his variety, while the other Orpington judges agreed with me that he should have the Dairy Show's silver medal for the best Orpington



Bantams on a Belgian Poultry Farm. [Copyright]

cockerel, thus beating the Blacks, Blues, Whites, Jubilees, Spangled, and Cuckoos. Each judge at the show was asked to nominate the best bird in his section to compete for the gold medal for best in show. No less than a dozen fowls were so selected, all champions of their respective breeds; but after carefully examining them my co-judges Messrs. T. Lambert and W. H. Silvester backed my fancy, and with one accord—it is not always so in such circumstances—we awarded the gold medal to the Buff Orpington cockerel.

Mr. Golding has been a breeder and fancier of Buffs for some years now, and while he has exhibited Blacks and Whites with no small measure of success he makes his "first love" his specialty. During the past two or three seasons he has come well to the front with Orpingtons of this colour, and not only with cockerels but with pullets. He generally does well at Hayward's Heath Show, where competition is always very keen; and this year at that fixture he won first prize with one of the very best Buff Orpington pullets I have ever seen, although he disposed of it shortly afterwards for a very big price. However, he has a few more excellent pullets among the 1913 hatch which should do much in the show pen to keep up the high reputation of this famous Kent yard. Truly "there is gold in Golding's golden Buffs"—the title he has given to his latest price list.

THE DEALER.

In making out a case for the dealer in last

month's ILLUSTRATED POULTRY RECORD, Miss Carey is somewhat hard on the breeder. On page 60 she says "I cannot place much trust in a breeder whatever his reputation in the show-pen may be"—and simply because she has not always had just what she wanted. In the same article she remarks "Because, however, there are a few dishonest folk in a business is that any reason to throw mud at a whole fraternity?"—this latter term referring to the dealer, or, as Miss Carey puts it, the retailer. To her question there is only one fair answer—decidedly not. But why "throw mud" at the breeder?

As in the utility line so in the Fancy; the dealer is part and parcel of the whole business, and, let me add, sometimes a necessary evil. The dealer—or retailer to put the finer point upon it—is not always spoken of in the highest terms; but in a large measure he has himself to blame for it. His object is to buy in the cheapest market and sell in the dearest—quite a legitimate business, mark you. But in his transactions with the breeder he has been known to demand his whole pound of flesh and a bit over. Let him charge a reasonable commission, just such a figure, for instance, as he offers to the man with brains who often carries out the transaction between breeder and dealer. Too frequently, however, he demands from the actual breeder, for £5, birds for which he (the dealer) gets £15 or £20; and if they do not come up to the £15 or £20 mark he grumbles.

It is just as well in all transactions to be reasonable. Even the small man nowadays knows something of the value of a good fowl; and knowing that big prices are available he is not going to part with his best unless he gets adequate compensation. Dealing, or retailing if you like, is not exactly an art, but one has to be possessed of much knowledge ere one can do it properly. There is, on the whole, more cause for complaint against dealers than against breeders. I hold no brief for either so I write with a free hand. I quite agree with Miss Carey that the expenses connected with dealing or retailing fancy poultry are great, and to the novice at it the risks are many. But, dealing is for the professional, comparatively few can do it in such a way as to make a living from it, and at the same time please both the breeder and the buyer.

SICILIAN BUTTERCUPS.

I was pleased to read Miss Blanche H. Stanton's article on "Sicilian Buttercups" in the November issue. And, let me add, I have never seen better illustrations of the breed than those which accompany her notes. These half-tone reproductions are charming in every way, and with the description of the colours in the letterpress one cannot fail to get an excellent idea of what is required in these Flower-birds. Visitors at the recent Dairy Show had a good chance of seeing the breed, since a pair of these birds was exhibited in the "Any other variety" classes. The cup comb is probably the distinctive feature, although the green legs are a

decided novelty; but one reporter at that event described the Buttercup cockerel as resembling "in other respects a small Red Leghorn" and the pullet as "a very weedy and washy Golden Pencilled Hamburg." Admittedly, for the ordinary fancier who is not well acquainted with all breeds of fowl, such descriptions as these are excusable. All poultry-men cannot see the breed from the enthusiastic Buttercup fancier's point of view, and most of them expect a finished article with full standard requirements. Of course this is unreasonable.

The breed has to make headway as regards the Fancy standard of excellence; but as Miss Stanton says, it has come to England to stay. There is plenty of room for it, and on top, too, if it is worth its salt; hence Buttercup fanciers must peg away, and when classes are provided for the breed, see that they are well supported. True enough, "they have not met with approval in the A. O. V. classes so far." As an all-round poultry judge let me say that this is quite reasonable, and simply because in "the tail end" classes there are so often excellent specimens of old and tried breeds and varieties to merit the prizes.

The only time that, to my recollection, I have had to pass judgement on a Sicilian Buttercup was in an A. O. V. class containing six birds. Here were a couple of very good White Plymouth Rocks, two Aseel, and a Houdan, in addition to the Buttercup cockerel; but this last bird had to get the lowest card, an h.c., because in my opinion he possessed a glaring fault, viz., he stood, in fanciers' parlance, in-kneed. I think, however, now that the Sicilian Buttercup Club has come into existence, it will have to get into line with other new variety clubs and guarantee classes for the breed at good shows. It is certainly one of the very best ways of placing the "goods" before the public. The remarkably good entry of 81 at the club show last month should give the breed a grand start in fancy circles.

THE DAIRY SHOW.

After all, the "RECORD" must justify its name; volume VI would be incomplete without some reference to the 1913 Dairy Show. This event, held from October 21st to 24th, with its more than 3,800 exhibits in the poultry section alone, was something of a record for the Islington fixture. The poultry committee therefore, is to be congratulated on getting together such a magnificent display. The management, under the supervision of that well-known organiser, Mr. L. C. Verrey, assisted by such experts in show details as Messrs. A. E. Sparrow, T. Threlford, and R. Kirk, was excellent in every way; while the rearranging of the penning—which I suggested in the "ILLUSTRATED POULTRY RECORD" last year—was greatly appreciated by exhibitors. No doubt about it the Dairy is the show of the year for Fancy reunions, and many were the "boys" who met each other there for the first time this season. So great, in

fact, was the Fancy element in the first day's crowd this year that it was hardly possible to see anything of the birds until the Wednesday. Many fanciers, however, put in a very early appearance in the galleries on the second day to compare their birds with others.

The run for the championship gold medal for the best fowl in the show was a keen one, and there was a good variety from which to pick. Thus the three judges—Mr. T. Lambert, Mr. W. H. Silvester, and I—who were selected by the Dairy Show committee to award the special had by no means an easy task. In the running were a Black Modern Langshan pullet, a Croad Langshan cockerel, a Speckled Sussex pullet, a Houdan pullet, a Silver Laced Wyandotte cockerel, a White Orpington pullet, a Buff Orpington cockerel, a rose-combed Rhode Island Red cockerel, a Silver Pencilled Hamburg cockerel, a Black Minorca cockerel, a White Leghorn cockerel, and a Barred Plymouth Rock cockerel. All of these fowls were champions of their own varieties, hence it can be imagined that they required "sorting out." It was, however, the unanimous finding of the trio that the medal should go to the Buff Orpington cockerel, since he was the bird with the least number of faults. The Waterfowl Cup went to Messrs. James Huntly & Son's grand Aylesbury duck. The bantam judges, Messrs. J. F. Entwistle and G. Barker, could not agree as to which exhibit in their section should have the cup, the one fancying the Gold Sebright hen, and the other the Pile Modern Game cock; hence, at the request of the Dairy Show committee I acted as "umpire," and decided in favour of the Sebright.

Of the birds which won the prizes at Islington little if anything can be said here, simply because not only is it somewhat "late in the day," but there is no room. Orpingtons, Wyandottes, and Rhode Island Reds were the strongest sections, while Plymouth Rocks and Sussex were also splendidly represented, and there were good displays of Leghorns, Minorcas, Old English Game, Indian Game, Malays, Dorkings, Faverolles, Campines, Andalusians, Modern and Croad Langshans, and other of the old breeds. The Bantam section, too, was a most interesting one; and the same may be said of the turkeys and the waterfowl, the geese, however, not being over numerous. All round, then, it was one of the greatest shows of the series, and certainly one of the best of the year.

LIVERPOOL SHOW.

I am afraid that the Liverpool Show, on the 4th and 5th ult., was something of a disappointment, to exhibitors as well as to its promoters. The Committee gave a very generous classification with the assistance of a few specialist clubs, and no less than 279 classes were offered for poultry alone. Of this number, as many as 94 had to be cancelled for lack of support. These included the two for breeding pens, the whole of those for Brahmans, two of the four for Cochins, four of the seven for Campines,

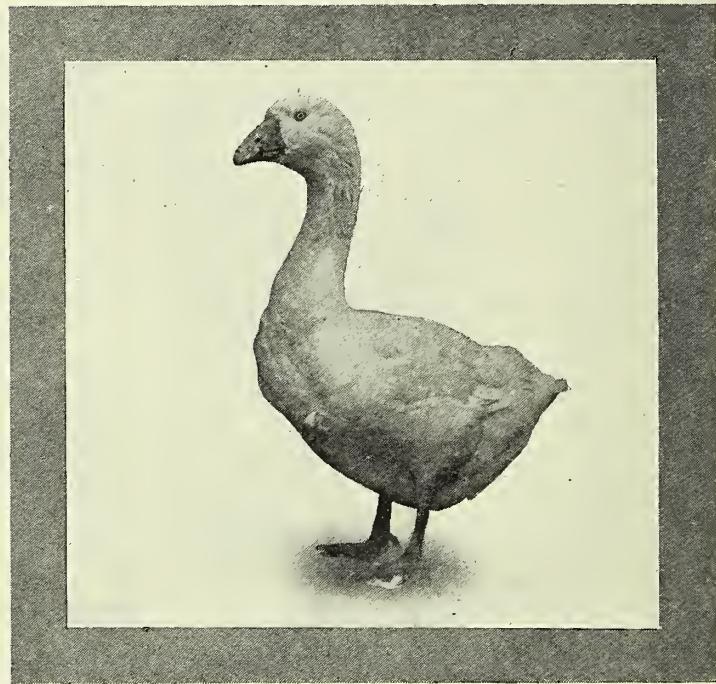
three of the four for Old English Game, and the whole of those for Buff Leghorns, Pile Leghorns, Bresse, Malines (six), and rose combed Minorcas. In such a very popular breed as Orpingtons, four of the eight for Black, and six of the ten for Buff had to be struck out. Wyandottes, too, suffered to the extent of having thirteen of the forty-one classes cancelled, while both of those for Redcaps were eliminated. Of ducks the original 22 were reduced to twelve classes, while in bantams the number cancelled was sixteen.

This was "wholesale slaughtering" for a show that would run as a classic; but exhibitions must have full support from fanciers to ensure financial success, and so small were the entries offered for the cancelled classes that had they been allowed to stand it would have resulted in a very heavy loss indeed. Of course, no one other than the veriest novice would expect a big show at the first time of asking to result in a profit; but few, if indeed, any promoters, no matter how great their enthusiasm for the Fancy, are prepared to ruin themselves for the good of the cause. It is too much to expect of anyone. All shows must pay their footing, and the Liverpool executive was quite prepared for this; but since it did not get the support anticipated it naturally enough cut out its weakest classes.

Classes with three, four, and five entries were allowed to stand, but chiefly only when guaranteed by a club or as part of a club show. However, both of those for rose combed White Orpingtons, with five a piece, were catalogued, as were Partridge Wyandotte cockerels with three, Cayuga ducks five, Embden ganders (old) five, and in Bantams, Indian Game cock five, Modern Game Black Red hen five, Duckwing cock three, and hen four, Old English Game hen five, and Gold Sebrights five and four respectively. The three egg classes (open competition) had entries of five white, eight tinted, and thirteen brown. In those provided for the Liverpool police one class was cancelled, and the three that stood mustered only eight entries,—four, two, and two; of the four for postmen two were struck out, and the two that remained had two entries and six respectively; while the four classes for officials and employees of the Liverpool and Bootle corporations had a total of 22, viz., four, nine, four, and five. This was, indeed, a very poor local support. The "Novel Selling Class"—a kind of auction without prizes—had 84 entries, and among them five priced at £15 each.

There were, it must be admitted, reasons for the somewhat poor support accorded to Liverpool. Perhaps one of the chief was the fact that the dates selected came at a rather awkward time, not only as regards their close proximity to the Dairy and the International, but clashing with or overlapping other old established and popular fixtures. Thus one was the great show of the West at Barnstaple, another, the popular Game and Bantam exhibition at Kendal, a third the big Welsh fixture at Cardiff, to name only a few. These all proved strong

attractions. Then, again, the schedule for the Liverpool event gave me the impression of having been rushed through at the last moment. It was not issued until very late, so late in fact that the executive found it impossible to close entries at the date originally advertised. It was full of errors, and the whole composition was such that made it most difficult for one to follow the classification. As a matter of fact, it struck one as altogether amateurish. To conduct such a big exhibition as Liverpool in a proper manner requires a most experienced show organiser. However, some experience will have been gained this year. There is room for a good show at Liverpool, and there are plenty of willing fanciers in the locality to do the work.



An Embden Goose.

[Copyright.]

London Dairy Show, Oct. 21st-24th, 1913.

In the Commercial Butter Classes 76, 77, and 78 five of the prizes fell to exhibits cured with Keep' "Diamond Brand" Preservative, including one first, two seconds and two thirds, the successful exhibitors being the Charleville Co-op. D. Soc. (Mr. Lacey, Manager) 1st prize, Miss C. G. Prideaux of Motcombe, and the Pomeroy Co-op. D. Soc.

This makes an aggregate of 121 prizes in the Butter Classes at the London Dairy Show during the past eleven years.

Parafield Poultry Station, South Australia.

From the description given in Colonial papers the new poultry station at Parafield is well equipped. It is stated that the main object of the poultry station is to test various methods of feeding, housing, rearing, and breeding on a large scale, and to tabulate and report results. Authorised laying competitions, public single testing, &c., will also form part of the work. The land will be thoroughly farmed, and much of the grain, &c., and all the green feed needed, will be grown on the farm.

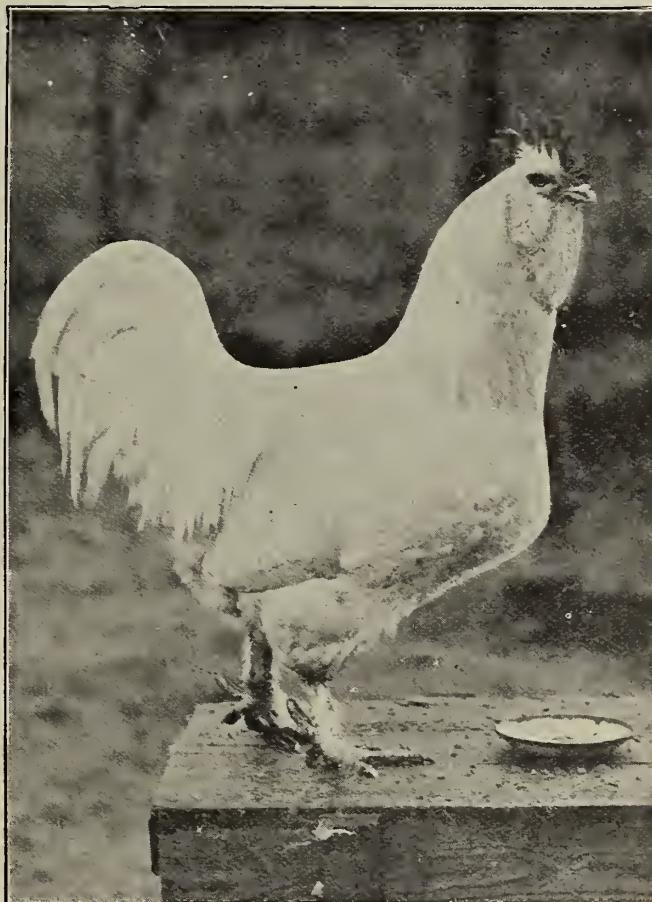
THE CRYSTAL PALACE SHOW.

By WILLIAM W. BROOMEHEAD.

"THE Greatest Show on Earth." It was the late Plineas T. Barnum, I believe, who originated this phrase, and it was the one he invariably used when referring to his own particular collection. Of recent times in the Fancy we have been in the habit of applying it to the Crystal Palace Show—in its early days the Great National but for the past ten years or so the Grand International—and last month's event, which took place on the 18th, 19th, and 20th fully merited the title. All records were broken, and the remarkable total of 7,540 entries—there were seventeen with an "a" attached—was reached in the section devoted to poultry. This, of course, included the classes for dead table poultry and those for appliances, but there were not more than 120 entries in these latter. Last year's total, it may be remembered, was a record; nevertheless, this time it has been exceeded by close on 500. Perhaps the increased entry at the "Dairy" in October set the fashion. Be that as it may, there can be little doubt that the Palace is "it" where poultry exhibitions are concerned. It was in all respects an excellent show and a complete success; and it says much for the splendid organising abilities of Messrs. T. Threlford and P. R. Harrower, the hon. secretaries.

It was a great meet of specialist club shows, and no less than thirty-six devoted solely to poultry held their annuals in connection with the International this year. As can be imagined the quality of the exhibits was of a very high standard, since almost without exception—and then only in the case of the owners being engaged at the event in a judicial capacity—the best yards in the country, as well as some of the most noted in America and on the continent, were represented. In addition to the prize money about 400 special prizes were offered, and of them the chief were the Sir James Blyth Challenge Cup for the best bird (either sex), the Champion Challenge Shield for the best cock or cockerel, and the Champion Challenge Trophy for the best hen or pullet. Certain restrictions are placed on these three specials, viz., that fanciers competing for them must be subscribers to the show funds. Nevertheless, competition for them was very keen, there being in the running ten male birds and nine hens or pullets, themselves all champions of their own breeds or varieties. Three judges—Mr. John Sneddon, Mr. Robert Stainthorp, and I—were appointed by the International Committee to "sort them out," and the birds were splendidly staged together at one height. The cup and shield were awarded to Mr. Richard Watson's Partridge Wyandotte cockerel, with Mr. H. Ainscough's Black Red Modern Game bantam cock as reserve for the shield, while the trophy went to Mr. George Procter's Buff Cochin hen, and the reserve to Messrs. William Cook & Sons' Blue Orpington hen.

Turning to the breeds, the first classes in the catalogue were for Breeding Pens—a cock or cockerel and two hens or pullets—and they made a really fine display, most of the birds, however, being exhibited for standard requirements rather than matched for actual breeding purposes. In the Langshan Society's Club Show there was a very nice entry, and despite the high standard to which the Modern Langshan has been bred for the past few years the breed is making progress. Blue Langshans—also a club show—are getting more settled in type, and approaching the Blacks in length and fineness of body and limb. The Croad Langshan Club show was well supported, the display of cockerels and pullets being particularly



A good type of Faverolles cock. [Copyright.]

numerous, and the competition was keen. Some grand entries of Coloured Dorkings were made in the Dorking Club Show, while the classes for Silver Greys came up well, and novices entered freely in the classes set aside for them. Cochins made a fine exhibit, and some good birds were on view, especially in Buffs, although the Blacks and Whites were not so numerous. The Brahma Club Show brought together some charming Darks and Lights, and the two classes for cockerel-breeding and pullet-breeding Darks were an interesting feature. Orpingtons, as usual, formed a great show on

their own, since the section included four club shows and a class for Reds. The Blacks came up well, and it is evident that the variety is coming into favour once more. The Buffs, too, were especially numerous, and it is remarkable how year after year these classes continue to be well filled. Mr. Robert L. Mond (of Combe Bank, near Seven-oaks) exhibited a rare team, with one enty in the hen class gaining the first prize, and with half-a-dozen pullets winning the five money prizes, the trophy for the best Buff, a cup, and two medals, which must constitute a record. Whites were included in the Variety Orpington Club Show—which caters for Jubilee and Spangled as well—and the display was a particularly strong one. Many champions were on view here, but some of them had to go down on account of a decided defect, viz., white in lobes, which is becoming too common now-a-days. There was not much quality in the Jubilees and Spangles, and I have seen better, much better, at previous club shows. There can be little doubt that those fanciers who have the good of these two varieties at heart must "get a move on" to save them from sinking into oblivion. As a contrast, however, there was a remarkably strong entry for the Blue Orpington Club Show, and better quality birds have never been penned. The trophy for the best Orpington, other than Buff, was again awarded to a Blue, and this is the third year in succession that a bird of this colour has beaten the Blacks, Whites, Jubilees, Spangled, and other varieties. The winner, the hen which secured the cup last year, was shown by Messrs. William Cook & Sons, and is without question, the best of her kind ever bred. Cuckoos do not make much headway, but Major H. M. Barnes and Messrs. William H. Cook, Ltd. had some very good specimens forward. The Reds were good, and I am pleased to be able to report a great advance in the variety.

Wyandottes, the show of the United Wyandotte Club, were one of the features of the International, the total entries mounting up to 795. This must be the biggest club show of the year, since no less than fifty-eight classes were scheduled for the nine or more varieties for which the club caters. As a whole it was, I believe, the finest collection of Wyandottes ever staged for competition. As usual Whites were the best supported classes, but Blacks, Partridges, Buffs, Blues, and Columbians were also good. Plymouth Rocks embraced the Barred and the Buff Clubs' Shows while classes were also provided for White and any other colour. Altogether about 350 entries were made, and the quality on the whole was of a high order. The Leghorn Club Show was a good one, Browns being the strongest numerically, with Whites and Blacks close up to them. Piles were present in nice numbers, but Blues were not quite so strong as they have been. There were not many Andalusians on show although the quality was well up to the mark. Minorcas, at the Club Show this year, were entered freely, but both classes for Whites were cancelled. The classes in

the Rosecomb Minorca Club Show filled particularly well, and there can be little doubt that this variety or sub-variety is making excellent headway. The Sussex Club Show proved a most interesting section, and throughout the classes the entries were good.

The Houdan Club Show was a grand one, while Malines also came up well. The Bresse Club Show had full support, but there is a tendency among fanciers of the breed to get the birds too big and heavy, which is a great mistake. Only Salmon and White Faverolles were catered for at the Palace, but there are some good Blacks as well as Buffs in the country, the latter being a really charming variety. Entries here were good and the quality was very high. I was not particularly struck with the Lakenfelder—printed as Lakenfelders in the catalogue—but, after all, there are very few specimens of this breed in England to-day. Redcaps, also, were somewhat disappointing, and particularly in view of the fact that the Redcap Club is a "live" body these days. The show of Hamburgs was a decidedly good one, Blacks being the strongest classes. The any other colour class was a "break" from the accustomed classification for the breed, and the result was a White or two, and some Buff-Laced—good birds as regards general characteristics but with room for some improvement in colour and markings. The Ancona Club Show was fairly well supported, and the Rosecombs seem to be coming on nicely. Competition in the Campine Club Show was very keen, and there was a very nice display of Golds. The Rhode Island Reds made as good a collection of the breed as I have ever seen at the Palace, and a great advance has been made in colour and shape.

The Indian Game Club Show drew a good entry and quality was well to the fore. The Black Sumatra Game Fowl Club Show did not prove a very strong one, and the breed appears to be losing ground. There was a fine display of Aseel, but Malay were not over numerous. Modern Game came up well, all things considered, and Old English Game made a great show. There was a record entry, for the Palace, of Scotch Greys, while Scots Dumpy or Bakies proved more interesting than usual. The Polands Club Show made quite a fine display, and it was pleasing to see so many good birds of this grand old breed. Frizzles had two classes, but only eight birds were entered. The Yokohama Club Show was confined to two classes and some good cocks were exhibited. The first Sicilian Buttercup Club Show resulted in 81 entries in three classes, but one would have liked more consistency in the judging. In the Any Other Variety classes were some of the old breeds—Spanish, Creve Cœur, and White and Rosecomb Dark Dorkings—and some of the new; and among the latter were two or three Sicilian Daisies. The craze for something new must be a peculiar one if there is a vogue for the Daisies. Other sections of the International were the bantams, the waterfowl, the turkeys, and the Belgian bantams, all most interesting and well supported.

POULTRY COOKERY.

COOKING AND SERVING GEESE.

A number of reliable and excellent recipes for the roasting, braising, hashing, &c., &c., of this favourite bird have already been given in previous issues of the I.P.R. but the following methods will, we hope, prove a welcome change.

SALMI OF GOOSE: In the making of a salmi a good richly-flavoured gravy is always required, and to prepare this indispensable item proceed as follows: Put the giblets into a stewpan with some rather highly seasoned stock and simmer gently until all the good has been extracted, then strain it off into a stewpan and add sufficient roux to bring it to a smooth creamy consistency. Roast the goose until about three parts cooked, after which cut it up into small neat joints and slices; lay these in the sauce and let them simmer slowly until done enough, then dish up neatly on a hot dish and pour the sauce over. Garnish the salmi with slices, or quarters of fresh lemon and sprigs of parsley and send to table very hot.

ROLLED GOOSE: Carefully prepare a plump young goose and divide it down the middle into two parts, then remove the bones without injuring the skin and lay the pieces flat on the board, or table, skin downwards. Spread over each a layer of forcemeat and roll up tightly; then cover entirely with slices of thinly-cut fat bacon and secure the rolls in shape with twine or narrow white tape. When thus prepared put them into a saucepan, cover with good stock, or with water (when a good supply of flavouring vegetables cut up small should be added) and when boiling point has been reached skim carefully and simmer slowly and steadily until the goose is sufficiently cooked. This is a most convenient dish as it may be served either hot or cold, and either way it is equally delicious. If it is to be eaten hot, place the rolls on a dish and remove the twine, or tape; strain and, if necessary, thicken the sauce, then pour a little of it over the goose, and send the rest to table in a tureen. If, however, the dish is to be served cold, allow the rolls to lie in the liquor for an hour or two, then when quite cold remove the fastening, and brush over with a few coats of glaze. Serve tastefully garnished with slices of lemon, roughly chopped aspic jelly, small fancy shapes of pickled beetroot, and sprigs of parsley.

GOOSE PUDDING, BAKED: This most appetising and economical dish is made from the remains of roast goose. Strip all the flesh from the bones and cut it into small neat pieces about an inch long half-an-inch wide, and not more than a quarter-of-an-inch thick; sprinkle these with salt, pepper, sage and lemon juice and cover them over in a cool place until required. Make some light batter with four tablespoonfuls of flour, half a teaspoonful of salt, two or three well beaten perfectly fresh eggs and a small quantity of milk. Beat the mixture well

until no lumps remain, then set it, too, in a cool place for a few hours; indeed it will be all the better if allowed to stand over night. Beat it again for a minute or two first before using, then pour a little of it at the bottom of a pie dish; next arrange a layer of the goose, distributing the pieces as evenly as possible, then add more batter, and so on until the dish is sufficiently full, letting batter form the topmost layer. Bake in a well-heated oven from half-an-hour to an hour, according to size. It may be served either in the dish in which it has been cooked, or turned out very carefully on to a flat dish and garnished with a border of crisply fried hot parsley. Send to table as quickly as possible.

CURRIED GOOSE: This is a most convenient way of using up the remaining parts of a roast goose. Put a dessertspoonful of curry powder and an equal quantity of cornflower into a basin and mix them to a smooth paste with cold water, then add, very gradually, a pint of boiling stock, stirring all the time with a small wooden spoon. Pour this sauce into a clean saucepan and stir constantly over a moderate fire until it becomes thick and smooth; then add the goose which has been cut up neatly, and simmer gently until the meat is quite hot through. When ready, arrange the goose in a pile on a hot dish and strain the sauce over. Garnish with slices of fresh tomatoes and lemons arranged alternately, and sprigs of fresh parsley interspersed and serve at once.

GOOSE A LA MODE: Peel two or three medium sized onions, chop them rather fine, and fry them in hot fat until they are soft, then dredge in a little flour (about a teaspoonful) and stir until nicely browned without being at all burnt. Now add half a pint of good stock, a seasoning of salt and pepper, a tablespoonful of strained lemon juice, three or four sound ripe tomatoes which have been skinned and cut in pieces, and a bunch of savoury herbs, and simmer gently for ten minutes; then add the remains of cooked goose cut up into small neat slices or pieces and continue to simmer slowly until the meat is thoroughly hot. Arrange a firm neatly-shaped border of rice or mashed potatoes round the edge of a hot dish and, after removing the bunch of herbs, pile up the goose, &c., in the centre. Ornament the border by inserting tiny sprigs of parsley here and there, garnish round about with skilfully fried croutons spread with a layer of sage and onion stuffing, and more parsley sprigs and serve very hot. If preferred, or in order to effect a pleasant change, the croutons may be omitted and the dish garnished instead with a dainty compôte of apples, oranges, or French plums.

Restricted Fowls.

The *Sydney Morning Herald* describes a plant at Dubbo, New South Wales, owned by Mr. C. E. Fahey, on which White Leghorns are kept under cover all the year, as has been tried both in Europe and America, and which, in spite of the heavy expense for equipment, is stated to be a success.

NEW LIGHTS ON ARTIFICIAL HATCHING.

To the Editor of THE ILLUSTRATED POULTRY RECORD.

DEAR SIR.—The reply to my article in the October number of the I.P.R. requires a more explicit explanation from me.

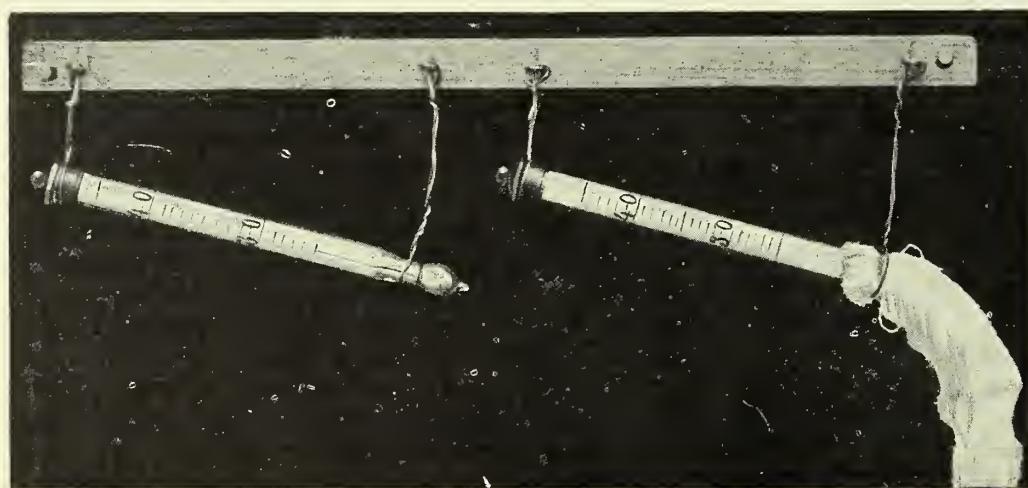
My trial apparatus (which is not on the market) has on both sides twelve small holes which can be closed, if necessary, by means of a little pad of wadding. Underneath, at the bottom, there is a slatted screen which can be closed or opened as desired by means of a chain. The air passes along the heater in the apparatus, becomes warmed there, expands, and presses the colder layer of air through the holes at the sides, and through the slatted screen, if open, out of the apparatus; the result is that a continual renewal of the air (ventilation) takes place, which can be rapid or slow as desired.

The humidity of the air is regulated by the strength of the ventilation.

Now come two important questions:

- 1.—How to measure the moisture of the air in the apparatus?
- 2.—How much moisture in the apparatus is most serviceable?

I may remark, that I have succeeded after many trials, in applying the psychrometer which indicates the moisture fairly accurately in slightly agitated air. I add an illustration:



The position of the two Thermometers described on this page. [Copyright.]

Two thermometers, lying level, are brought into use in the apparatus. One thermometer shows the temperature, the other has the quicksilver bulb wrapped in gauze. This gauze lies in a bowl which must always be kept filled with water. The moisture can be calculated by observing the difference between the two thermometers. If, for example, the dry thermometer shows 104° F., and the wet thermometer shows 86° F., then we have 50% or 50° moisture.

This means of measuring the moisture is employed in many meteorological stations, and is not a new instrument. The employment of this instrument in the incubator was, as far as I know, first practised

by me. Since we could now measure the moisture, there still remained the question of how much moisture in the apparatus was necessary for the object in view. A certain fact was already known. For human beings a moisture between 40° and 75° is most suitable. When the temperature is high, a low degree of humidity is most agreeable to us. After several trials excellent results were obtained from a moisture of 50°.

These trials were repeated very often, and each time produced from 80% to 90% of chickens.

At the same time the observation was made, why so many chicks die in the shell. Between the 18th and 20th days the moisture increases in an extraordinary manner in the egg drawer. The wet bulb rose to 95° F., and indicated 73° of moisture. With human beings great warmth and great moisture produce heart attacks, pneumonia, and cerebral apoplexy.

All chickens which die during the last two days, die solely from apoplexy.

By means of the slatted flaps and side openings the moisture can be regulated exactly, in the same way as the heat, but practice is necessary. If on the 18th or 19th day the drawer with the eggs is submitted to a strong cooling off, in a room which is not too cool, with a temperature of 60° to 65° F., for six hours, then this cooling off brings about an extremely good result. No harm was done even when the egg drawer was left for the whole night outside the apparatus.

My establishment is of an entirely private nature, and has already worked uninterruptedly since 1896 to solve the problem of artificial hatching. Only through such experiments, in conjunction with tests by others, can the complete solution of this problem be expected. The way is indicated. At the same time the following points may be noted. When good setting eggs are desired, the hens must not be overfed. From pullethood the fowls must have barely sufficient food, and where an abundance of Lucerne hay is obtainable the flesh food should be discontinued.

Chief Point. Green food with open runs, corn food only at night and not too much. A sudden change in the feeding does more harm than good. The thermometer on the eggs in the egg chamber must never register over 104° F.

Yours, etc.,

Crefeld (Germany).

P. SWEERS.

[The psychrometer mentioned is the ordinary wet and dry bulb thermometer in use in this country, though slightly modified to adapt it for the special conditions under which it is employed. Ed., I.P.R.]

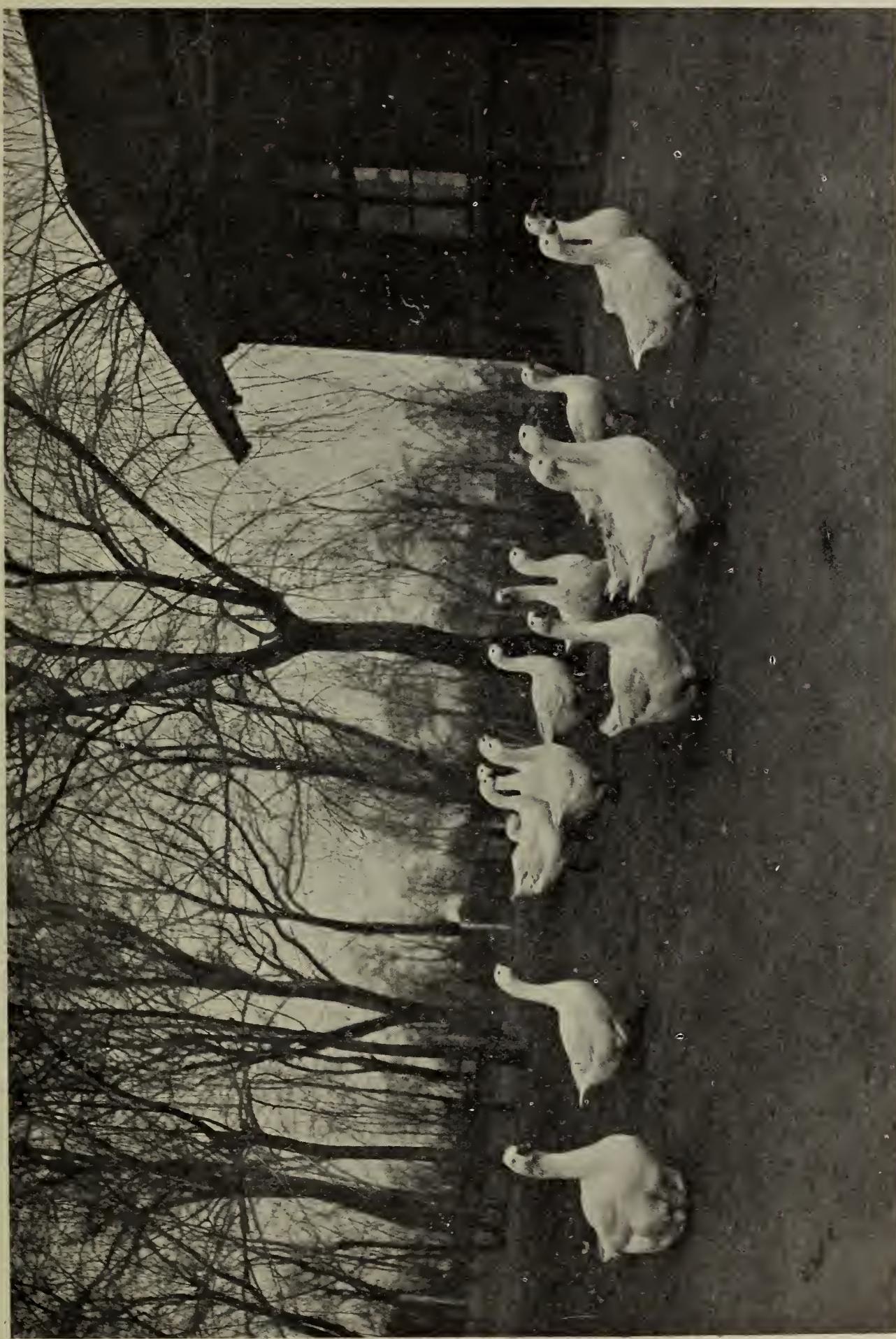
December, 1913.

THE ILLUSTRATED POULTRY RECORD.

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[Copyright.]

Group of Hungarian Geese at the Poultry School, Godollo, Hungary.



TRADE EXHIBITS AT THE CRYSTAL PALACE.



STAND-HOLDERS at the Dairy Show are always more or less handicapped by the limited space at their disposal, but the same cannot be said of the Palace fixture. There is plenty of room and exhibitors make the most of the increased area by staging their goods so as to display the special features to the best advantage. There are a number of special exhibits which are well worthy of mention, but unfortunately we can only deal briefly with each one. These we mention in alphabetical order, as follows:—

Abbot Bros., Thuxton, Norfolk. Although a small stand the display staged by this firm included all kinds of small appliances for poultry keeping. The Spike Poultry Fountain is one of the best and cheapest on the market. It is practically undamageable and is designed to stand rough usage, and will last years. This firm is noted for the quality of its stock and takes a leading place among the poultry farms of England.

The Allen Poultry Co., Ltd., Sawbridgeworth, Herts. The usual attractive display of poultry foods and medicines was made by this popular firm. Captain Allen presided at the exhibit, his time being kept fully occupied.

A new and attractive article on this stand was the "Safe Egg-box." Applying the principle of "controlled suspension," it consists of a box suspended within a box, consequently any damage in transit due to careless handing is sustained by the outer case, the contents of the inner one (eggs) being absolutely unharmed. Any experienced poultry-keeper can pack eggs to secure safe transit but not to guarantee their hatchability; by adopting these boxes this difficulty is overcome.

Needless to remark, Colman's Poultry Mustard was a popular feature at this exhibit, despite the fact that no less than 50,000 copies of "More About Egg-Production" were printed in September last, the edition is now exhausted, a second edition of 25,000, however, is in the press, so that the offer of a free copy to our readers who apply to Capt R. R. Allen, Sawbridgeworth, Herts, still holds good.

Cook, W. H., Orpington and Le Touquet. This stand was well worth a visit, not only on account of the photographs, medicines, etc., that were staged, but because of the information which it is always possible to pick up from Mr. Cook. The fund of information that Mr. Cook always has with him is of such a nature that no poultry keeper can afford to omit a visit to this exhibit during a round of the show. No one, whether he be fancier, utility man or amateur, can talk to the principal of this firm without learning a good bit about the latest poultry methods.

Cook & Sons, W., Orpington House, St. Mary Cray. This firm had a small, but very attractive stand, and samples of the various foods,

grits, etc., take up the greater portion of the space at their disposal. One may be certain that anything offered by this firm has been well tested and proved its value, otherwise, it would not be staged.

Craven's Patent, The, Manchester. A full comprehensive line of poultry samples of all kinds and other sundries relating to the industry were staged by this firm. The increase in business is undoubtedly due to the quality of the goods sent out by this Manchester establishment, and the promptitude with which all orders are fulfilled.

Cypher's Incubator Co., Finsbury Pavement, London. There was a very fine display of all kinds of appliances and foodstuffs exhibited by this firm of world-wide reputation. Their models are fitted with all the latest and most up-to-date improvements which are not only specialties for this country, but are adapted for use in all countries and all climates. Within the past four weeks a new lamp has been fitted to the Cyphers incubators which is fire-proof. This is a big statement to make, but the very fact that it is accepted by the insurance companies of America is sufficient to warrant one making the fact public. Even English companies, having branches in the States, such as the Norwich Union, accept this special heater as fire-proof.

Dixon's Poultry Hospital, Birmingham. A very fine exhibit of poultry remedies was staged by this well-known firm. Even without reading the numberless testimonials received by Messrs. Dixon, every poultry-keeper knows the value of R.P. It is one of the best preventive powders on the market.

Finch & Fleming, Ltd., Flintwick, Beds. The American Automatic Feeder for which this firm holds the sole manufacturing rights for the Eastern Hemisphere was again on view. This is a very simple contrivance, but it is practical and an economical labour-saving device. It is made in various sizes, one of the best having a capacity for sufficient grain for thirty birds for a week. We have pleasure in introducing this appliance to our foreign readers, and we assure them that this is one of the very best hoppers on the market for feeding purposes. To save labour and to feed judiciously are two of the secrets of successful poultry keeping. This automatic feeder and exerciser is a first-class proposition.

One of the most essential points of a good brooder is the supply of plenty of ventilation without draughts. The "F & F" Brooder has one of the most perfect systems of ventilation. The air supplied to chickens in a foster-mother must be *warm* and must be *fresh*. In the "F & F" Brooder the tube which conveys the heat from the lamp to the hover is surrounded by an outer jacket. A current of fresh air is continually passing up this outer jacket and is discharged at a gentle warmth

under the hover over the backs of the chickens. The fresh-air duct is quite distinct from the tube which carries the heat from the lamp, and thus provides ventilation that is absolutely *pure*, and in no wise contaminated by contact with lamp fumes. In the "F & F" Brooder the supply of air is fresh. It is drawn sweet and pure from the outer air, and contains no injurious fumes from either the lamp or the lamp chamber.

Gloucester Incubator Co., Gloucester. The show of incubators and other appliances made by this firm is very good indeed. The Gloucester Incubator is self-ventilating and regulating, and has been on the market for some years and it has secured for itself a foremost position as a successful hatcher of fertile eggs. The self turning egg tray is a masterpiece of ingenuity and it takes away the most tedious part of the necessary attention to the incubators.

Hebditch, Harry, Martock, Somersetshire. This name attached to any appliance is a guarantee of quality and workmanship, and this is undoubtedly proved by the very rapid growth of Mr. Hebditch's business during recent years. The special features of this exhibit are a simple form of trap nest, a well designed house, called the "Sterling" poultry house, and electric light fittings in the incubator to enable the operator to read the temperature easily and a special tray fitted for turning the eggs rapidly and without jarring.

Jewers' Poultry Food, Lord's Mill, Chesham, Bucks. Besides the various samples of foods shown by this firm, there are a number of models of poultry houses, fitted with coloured glass windows. The originators of this idea state that: "light energy acts directly upon the blood, increasing oxidation, consequently warmth; if the poultry are confined in houses as in the intensive system with covered wood roofs the oxygenating power on the blood is decreased the birds become lifeless and inactive. The value of light energy is determined upon its intensity. It has been found by experience that poultry in every stage of existence are more profitably reared with isolated, separate forces of sunlight, than united as a white light."

This suggestion has not as yet stood the test of time, but one does know that the effect of red, blue and violet light is different in each case and it may prove beneficial to use a different colour during the various stages of a bird's life.

Meech, Randolph, Poole, Dorset. As one would expect, since Mr. Meech was the pioneer of the intensive system in Great Britain, he again made a special feature of this new system of poultry keeping at his usual stand in the Gallery. The whole display of houses, fireless brooders, coops, and double-decker houses, attracted a very large number of visitors during the entire day.

Morland Appliance, Co., Crawley, Sussex. There were two special features shown by this firm, both of which are of practical value to every

poultry keeper. The first was a remarkable form of trap nest and it is constructed in such a way that there is no possibility of the mechanism getting out of order. It is sold at a reasonable price, and seeing the trap nest is of such value when the records obtained are utilised in the proper manner, we anticipate a large sale for this special form. The second feature of this stand was the double brooder that was being shown for the second year. It is the only appliance of this form on the market in which it is possible to have a different temperature in the two sections. An intensive house was also being shown by this up-to-date firm, and in all details it is remarkably good.

Phipps, A. E. W., Harborne, Birmingham. The hot air and tank incubators of this firm are so well known that there is no necessity for us to introduce them to our readers. From the point of view of Mr. Phipps, the two main points with poultry appliances are the way in which they are constructed, and the results which follow the efforts of those who use them. Whether it is with the incubators, fireless brooders, or the three compartment rearer, Mr. Phipps has been successful in realising his ideals in this direction.

Phostco, Emsworth, Hants. For the production of large-framed, white fleshed birds, there is no doubt that "Phostco" is one of the very best materials that is on the market. It is also excellent for getting birds into show condition, and it is unrivalled for producing strong germs in fertile eggs, and also for increasing egg production.

Snell, W. F., Yeovil. Some very useful appliances were shown on this stand, and the one that particularly took our eye was the cheap form of rearer which has been so intensively sold by Mr. Snell. This can easily be converted into a cold rearer when the occasion arises, and as one half of the run compartment is covered it gives ample protection for the birds from the time they are hatched. The green food, water, and grit rack, the trap nest, the metal fountain, and the "easy cleaner" floor are all worthy of attention.

Spratts Patent, Ltd., 24, Fenchurch Street, E.C. The Hearson Incubators, brooders, and crammers staged by this well known firm are world famous, and still hold a premier place as has been the case for so many years past. The display included a full line of foods, medicines, and appliances. The goods bearing this name require no lengthy reference as Spratts is a household word.

Stevens, Horace W., Linden Road, Gloucester. A new egg-turning tray is now fitted to the incubators made by this well-known firm. It is a very simple contrivance, and one would imagine that the results would be excellent, not only as a time-saving machine but also inasmuch as it does not jar any of the eggs during the turning. The moisture device fitted to the hot air incubator and the "Gravel Hill" brooder are both worthy of mention.

A. Thorpe & Sons, Rye, Sussex. The demand for this firm's goods continues to increase and very favourable results as to the value of their foods are being received every day. In addition to the ordinary samples of foods and medicines, a special display of their "Cock o' the Walk" meal was made. This food is reckoned as a marvel for increasing egg production, and this statement is justified by the ever-increasing demand.

White, Tomkins & Courage, Ltd., 48 Mark Lane, London, E.C. This well-known firm is showing their "Clarendo" poultry foods. The results that have accrued in the many tests that have been undertaken go to prove the value of this feeding stuff is remarkable. The latest growing test showing that birds can be reared to an average weight of 3lbs. 4 $\frac{1}{2}$ ozs. at a cost of 4 $\frac{1}{2}$ d.

Yates & Co., Ltd., Croydon. Excellent results are being obtained by the use of "Makem-layo," manufactured by this firm. It is a splendid preparation for getting birds into good condition; in helping moulting and for inducing pullets to lay. It has also been found very valuable for turkeys, especially at this time of the year when they want all they can get to bring them into good form for the market. Feed in the soft mash and the benefit will very soon be apparent.

A FORECAST OF THE CHRISTMAS MARKETS.

THE section of the community that is mostly concerned at the present time as to the prospects of the demand and supply of poultry this month, is that which is interested principally in the work of production. After months of labour and expense one wants to be able to form some opinion as to what return will be received as recompense and profit for the energies extended.

It is an extremely difficult matter to come to any definite conclusions as to the probable state of any future market. So many factors must be taken into account, and many only become apparent at a late date. Those who have had previous experience in pre-estimating probabilities in this direction, assure us that the demand for all classes of birds this Christmas is likely to be quite as good, if not better, than in former years. The trade of the country as a whole is booming, and this always means that the great buying public has more money to spend upon what are to a certain extent luxuries. Again, there is a possibility that foreign supplies may fall rather short this year, and this is particularly true of the better quality produce.

These two factors together seem to indicate that

poultry keepers are likely to realise good prices for their goods.

A very great mistake is made by many producers in that they fail to fully realise the importance of getting their birds into the height of condition when they are serving the leading markets of the country. It is folly to send badly fattened, poor condition specimens to London, for enormous supplies of this class of goods are always in evidence, hence prices rule low. To secure the best results only first class goods should be sold in London, Birmingham, Manchester, Liverpool, and the larger towns of the country. It is very seldom that the supply of first quality produce is greater than the demand, and this point should always be considered.

To go into particulars, as far as is possible, the indications at the present time are that turkeys will command a good figure, especially those of medium weight. Whereas, the largest specimens used invariably to realise the highest prices per pound, this is not the case to-day. For quality in all respects a turkey poult, weighing from 12-15lbs. is superior to any other weight. Excepting in isolated cases birds weighing 25lbs. and upwards are not eagerly bought, and, therefore, producers should devote their attention to smaller sized birds of exceptional quality. That very large numbers of turkeys will be imported again this year, is undoubtedly true, but we shall be surprised if the numbers are as great as in former years. There is no turkey to equal the home grown, and these are always in good demand and at paying prices, no matter how great are the consignments of foreign birds. Traders are shortly expecting a sharp demand and at slightly enhanced prices.

Although there has been such a rapid rise in the demand for turkeys during the past fifteen years, there is always a ready sale for well-fleshed geese. The price of these is likely to be rather lower than was the case last year, since the supply, as far as we can tell, is greater, but all the same the best specimens will well repay the producer for outlay and labour.

There is no doubt that the demand for ducks, fowls, capons, etc., will be well up to the average and especially with the two last mentioned. There is a possibility that prices will assume slightly higher proportions. The past rearing season has not been altogether a good one, and hence the supply coming to the market may be somewhat decreased.

Taken as a whole we may prophesy that the coming Christmas market will be a good one for those who have a supply of well conditioned poultry for sale. We are not allowing in our remarks for any possible outside influence, such as railway strikes, etc., and we have simply dealt briefly with the prospects of the market as they appear to those in the trade viewed some weeks ahead.

TABLE OF PRICES REALISED FOR HOME, COLONIAL, AND FOREIGN POULTRY,
GAME, AND EGGS FOR THE FOUR WEEKS ENDING NOVEMBER 15th, 1913.

ENGLISH POULTRY-LONDON MARKETS.

| DESCRIPTION. | | 1st Week. | | 2nd Week. | | 3rd Week. | | 4th Week. | | COUNTRIES OF ORIGIN. | | | | | | PRICES REALIZED DURING THE MONTH. | | |
|--|--------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|--------------------------------|--------------------------|---------------------------------|----------------------------------|------------------|-----------------------------|-----------------------------------|------------------|----------|
| | | Each | Each. | CHICKENS. | Ducks. | Ducklings. | Geese. | Per lb. | Turkeys. | Per lb. | | |
| Surrey Chickens | 2/9 to 3/6 | 2/6 to 3/6 | 2/9 to 4/0 | 2/9 to 3/6 | 2/9 to 4/0 | 2/9 to 3/6 | 2/9 to 4/0 | 2/9 to 3/6 | 2/9 to 4/0 | Russia | /9 to 10 | — | — | — | — | — | — | |
| Sussex ,,, | 2/9 " 3/0 | 2/6 " 3/0 | 2/9 " 4/0 | 2/9 " 3/6 | 2/9 " 4/0 | 2/9 " 3/6 | 2/9 " 4/0 | 2/9 " 3/6 | 2/9 " 4/0 | Belgium | — | — | — | — | — | — | — | |
| Boston ,,, | 2/0 " 3/3 | 2/0 " 3/3 | 1/9 " 3/0 | 2/0 " 3/6 | 2/0 " 3/3 | 2/0 " 3/6 | 2/0 " 3/3 | 2/0 " 3/6 | 2/0 " 3/3 | France | — | — | — | — | — | — | — | |
| Essex ,,, | 2/0 " 3/6 | 2/0 " 3/6 | 2/0 " 3/3 | 2/0 " 3/6 | 2/0 " 3/3 | 2/0 " 3/6 | 2/0 " 3/3 | 2/0 " 3/6 | 2/0 " 3/3 | United States of America | /9 | — | — | — | — | — | — | |
| Caponos | 4/6 " 5/6 | 4/6 " 5/6 | 4/6 " 5/6 | 4/6 " 5/6 | 4/6 " 5/6 | 4/6 " 5/6 | 4/6 " 5/6 | 4/6 " 5/6 | 4/6 " 5/6 | Austria | — | — | — | — | — | — | — | |
| Irish Chickens | 1/9 " 3/0 | 1/6 " 2/9 | 1/9 " 2/9 | 1/9 " 3/0 | 1/9 " 2/9 | 1/9 " 3/0 | 1/9 " 2/9 | 1/9 " 3/0 | 1/9 " 2/9 | Canada | — | — | — | — | — | — | — | |
| Live Hens..... | 1/9 " 2/6 | 1/3 " 2/6 | 1/3 " 2/6 | 1/3 " 2/6 | 1/3 " 2/6 | 1/3 " 2/6 | 1/3 " 2/6 | 1/3 " 2/6 | 1/3 " 2/6 | Australia | — | — | — | — | — | — | — | |
| Aylesbury Ducklings | 2/6 " 3/9 | 2/6 " 3/9 | 2/6 " 3/6 | 2/6 " 3/6 | 2/6 " 3/6 | 2/6 " 3/6 | 2/6 " 3/6 | 2/6 " 3/6 | 2/6 " 3/6 | — | — | — | — | — | — | — | — | |
| Ducks | 4/6 " 6/0 | 5/0 " 6/0 | 6/6 " 5/0 | 6/6 " 5/0 | 6/6 " 5/0 | 6/6 " 5/0 | 6/6 " 5/0 | 6/6 " 5/0 | 6/6 " 5/0 | FOREIGN GAME. | Price Each During Month. | IMPORTS OF DEAD POULTRY & GAME. | MONTH ENDING OCTOBER 31ST, 1913. | DECLARED VALUES. | Poultry. | Game. | | |
| Turkeys,.....lb. | 1/0 " 1/0 | 1/0 " 1/0 | 1/0 " 1/0 | 1/0 " 1/0 | 1/0 " 1/0 | 1/0 " 1/0 | 1/0 " 1/0 | 1/0 " 1/0 | 1/0 " 1/0 | Guinea Fowls | — | — | — | — | — | — | — | |
| ENGLISH GAME—LONDON MARKETS. | | | | | | | | | | | | | | | | | | |
| DESCRIPTION. | | Each. | Each. | Each. | Each. | Each. | Each. | Each. | Each. | COUNTRIES OF ORIGIN. | | | | | | DECLARED VALUES. | | |
| Grouse | 2/6 " 3/0 | 2/6 " 3/0 | 2/6 " 3/0 | 2/6 " 3/0 | 2/6 " 3/0 | 2/6 " 3/0 | 2/6 " 3/0 | 2/6 " 3/0 | 2/6 " 3/0 | Russia | — | — | — | — | — | £2,704 | — | — |
| Partridges | 1/9 " 2/0 | 1/9 " 2/0 | 1/9 " 2/0 | 2/0 " 2/0 | 2/0 " 2/0 | 2/0 " 2/0 | 2/0 " 2/0 | 2/0 " 2/0 | 2/0 " 2/0 | France | 1/6 to 1/10 | £1,899 | £46 | — | — | — | — | — |
| Pheasants | 2/9 " 3/3 | 2/3 " 2/3 | 2/3 " 2/3 | 2/9 " 2/3 | 2/9 " 2/3 | 2/9 " 2/3 | 2/9 " 2/3 | 2/9 " 2/3 | 2/9 " 2/3 | Bordeaux Pigeons | — | — | — | — | — | £439 | — | — |
| Black Game | — | — | — | — | — | — | — | — | — | Hares | — | — | — | — | — | £2,630 | £4,335 | — |
| Hares | 2/6 " 2/9 | 2/6 " 2/9 | 2/6 " 2/9 | 2/3 " 2/9 | 2/3 " 2/9 | 2/3 " 2/9 | 2/3 " 2/9 | 2/3 " 2/9 | 2/3 " 2/9 | Snipe | — | — | — | — | — | Totals..... | £7,672 | £4,381 |
| Rabbits, Tame | 1/0 " 1/6 | 1/0 " 1/6 | 1/0 " 1/6 | 1/0 " 1/6 | 1/0 " 1/6 | 1/0 " 1/6 | 1/0 " 1/6 | 1/0 " 1/6 | 1/0 " 1/6 | Capercaillie | — | — | — | — | — | IRISH EGGS. | | |
| " Wild | 1/9 " 1/0 | 1/9 " 1/0 | 1/9 " 1/0 | 1/9 " 1/0 | 1/9 " 1/0 | 1/9 " 1/0 | 1/9 " 1/0 | 1/9 " 1/0 | 1/9 " 1/0 | Black Game | — | — | — | — | — | IRISH EGGS. | | |
| Pigeons, Tame | — | — | — | — | — | — | — | — | — | Partridges | 1/6 to 1/10 | £1,899 | £46 | — | — | IRISH EGGS. | | |
| Wild , Duck | — | — | — | — | — | — | — | — | — | Quail | — | — | — | — | — | IRISH EGGS. | | |
| Wild Hazel Hens | 1/9 " 1/1 | 2/0 " 1/1 | 1/9 " 1/1 | 2/0 " 1/1 | 1/9 " 1/1 | 2/0 " 1/1 | 1/9 " 1/1 | 2/0 " 1/1 | 1/9 " 1/1 | Description. | 1st Week. | 2nd Week. | 3rd Week. | 4th Week. | MONTH ENDING OCT. 31, 1913. | IMPORTS OF EGGS. | | |
| Snipe | — | — | — | — | — | — | — | — | — | Per 120. | Per 120. | Per 120. | Per 120. | Per 120. | COUNTRIES OF ORIGIN. | Quantities in Gt. Hund. | Declared Values. | |
| Plover | 6 " 9 | 6 " 9 | 6 " 9 | 6 " 9 | 6 " 9 | 6 " 9 | 6 " 9 | 6 " 9 | 6 " 9 | Irish Eggs 13/0 to 14/6 | 13/6 to 15/0 | 14/6 to 16/0 | 14/6 to 16/0 | 14/6 to 16/0 | Russia | 1,324,273 | £601,482 | |
| ENGLISH EGGS (Guaranteed New-Laid). | | | | | | | | | | | | | | | | | | |
| MARKETS. | | Per 120. | Per 120. | Per 120. | Per 120. | Per 120. | Per 120. | Per 120. | Per 120. | DESCRIPTION. | 1st Week. | 2nd Week. | 3rd Week. | 4th Week. | PERIOD. | FOREIGN EGGS. | | |
| LONDON | 14/- to 16/- | 16/- to 18/- | 16/- to 18/- | 16/- to 18/- | 16/- to 18/- | 16/- to 18/- | 16/- to 18/- | 16/- to 18/- | 16/- to 18/- | French | 13/0 to 14/6 | 13/6 to 14/6 | 14/6 to 15/0 | 15/0 to 17/6 | Per 120. | Denmark | 416,401 | £244,071 |
| Provinces. | | Eggs per dozen. | Eggs per dozen. | Eggs per dozen. | Eggs per dozen. | Eggs per dozen. | Eggs per dozen. | Eggs per dozen. | Eggs per dozen. | Danish | 13/0 " 14/0 | 14/0 " 14/6 | 15/0 " 15/0 | 15/0 " 17/6 | Per 120. | Germany | 51,165 | £22,028 |
| CARLISLE | 1/6 | 1/9 | 2/0 | 2/0 | 2/0 | 2/0 | 2/0 | 2/0 | 2/0 | Italian | 12/9 " 13/0 | 13/0 " 13/9 | 13/9 " 14/0 | 13/9 " 15/0 | Per 120. | Netherlands | 59,562 | £34,829 |
| BRISTOL, | 1/5 | 1/7 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | Austrian.. | 8/9 " 9/0 | 9/0 " 10/0 | 10/0 " 11/0 | 11/0 " 12/0 | Per 120. | France | 35,286 | £16,880 |
| | | | | | | | | | | Russian.. | 8/9 " 10/0 | 8/9 " 10/0 | 10/0 " 11/0 | 11/0 " 12/0 | Per 120. | Italy | 39,126 | £20,693 |
| | | | | | | | | | | | | | | | Aust.-Hungary | 46,196 | £20,635 | |
| | | | | | | | | | | | | | | | Other countries | 69,408 | £31,823 | |
| | | | | | | | | | | | | | | | Totals | 2,041,417 | £992,441 | |

POULTRY RAISING IN CALIFORNIA.

To the Editor of the "ILLUSTRATED POULTRY RECORD."

Sir,—I sometimes see a copy of your paper out here, and knowing it has a large circulation among the farming classes I venture to write you, as my letter may be of interest to many of your other readers. As you will see, I am writing from the world-renowned "Santa Clara Valley," the home of the prune, peach, apricot, and orange, and where the climate is ideal in every respect, a land of almost perpetual sunshine, and yet cool enough to be pleasant all the time.

I am an Englishman, and during the last thirty years have travelled practically all over the world and gone in for poultry farming on a very large scale. I am now running a ranch with 50,000 laying hens and incubators to hold 25,000 eggs (the largest poultry enterprise in California), and with my experience I am fully convinced this is one of the best places (if not the best) in the world for making money out of poultry.

The supply is not nearly equal to the demand, and the cost of production considerably less than in England, and the wholesale price this month 2/6 per dozen. At the present time I could dispose of many thousands more eggs daily in the near neighbourhood here, and next year, and during 1915, there will be an absolute famine in poultry and eggs, as the coming Panama Exposition at San Francisco (thirty miles from here) will bring together over 20,000,000 visitors from all parts of the world, many of whom will afterwards make their home in this valley.

Now is the opportunity for anyone wishing to improve his position and to have a comfortable home amid congenial surroundings, and to anyone, say, with £500 or more I can guarantee that he will make at least from £200 to £250 per annum clear profit after paying all expenses, and without any physical hard work either.

There is some fertile land to be had here, and occasionally a place with a comfortable dwelling house, poultry houses, and a nice orchard. I would suggest a five or ten acre ranch, plant 500 fruit trees if not already there (both for shade and profit) and have a stock of at least a thousand laying hens—the white Leghorn non-sitting variety are the only kind I keep on my ranch—and I know he will find a ready market for all he can produce, close at hand. Land increases in value every year, and I am quite safe in saying every branch of farming pays remarkably well.

There are already some English here. I should like to see a great many more—in fact, to establish an English colony here.

I shall be pleased to send particulars to any of your readers who are interested in poultry farming.

J. S. NUTMAN.

Mayfield, California, Oct. 15th, 1913.

AUDLEMS!

To the Editor of the "ILLUSTRATED POULTRY RECORD."

Sir,—Readers of your valuable paper may be interested in a few particulars of the Audlems, the breed I am bringing before the public this season.

They are to be first and foremost a utility fowl, and will rely on their own usefulness to bring them to popularity. The special advantages I claim for the Audlems are:—

- (1) Dark plumage (resembling the golden Campine somewhat), making them suitable for small or town runs.
- (2) Small, neat, single combs, which will not easily be frost-bitten.
- (3) Medium size, and active (neither too heavy and lazy, or too light and wild).
- (4) White flesh, making them have a nice appearance for the table.
- (5) Almost non-sitters, seldom becoming broody until August.

The legs are of medium length and yellow, the lobes are red, and the body has a cobby or compact appearance.

The plumage of the hen is golden-buff, pencilled with black on wings, back, and tail; the cocks are a bright light red with black tails.

Thanking you for allowing me space in your valuable paper.

J. R. G. SMITH.

INCUBATORS AND HATCHING EGGS.

To the Editor of the "ILLUSTRATED POULTRY RECORD."

Dear Sir,—By the courtesy of Messrs. J. T. Rennie, Sons & Co., and their sympathetic co-operation in ordering the necessary arrangements to be carried out, I am enabled to inform you that I am shipping by one of their steamers, the s.s. "Inanda," sailing to-day for Durban, one Hearson's incubator containing 28 hatching eggs, as also separately, one insulated box containing 60 hatching eggs, and the following particulars may interest you for purposes of publication. The appliances have been supplied by Messrs. Spratts Patent, Ltd., of London, and consist of an incubator which is fitted up to be worked by the ship's electric power, 60 volts. The s.s. "Inanda" taking 25 to 26 days for the voyage from London to Durban, it has been arranged that the electric current shall only be connected up with the incubator when the steamer was out one week, thus timing the period of incubation, so that chicks hatch out a day or two after the arrival at Durban. The machine and eggs are consigned by me to Mr. Shipton, of Messrs. Henwood, Son & Souter & Co., of Durban, who will arrange for the landing and care of incubator and hatching eggs upon arrival of the s.s. "Inanda," when he will immediately see to the transferring of the eggs to a hatching incubator ready for their reception. During the voyage the working of the incubator is under the care of Mr. Williamis, the chief engineer of the s.s. "Inanda," who has kindly consented to give same his attention, and see to all the requisite turning of the eggs and the temperature of the machine.

The insulated box containing 60 hatching eggs are, of course, only intended to be put into the incubator after arrival at Durban. This appliance is quite a novel idea, and as it works on swivel brackets the turning over is exceedingly simple and is done without the slightest risk of damage to the eggs. The box is made with very thick sides which are packed up with sawdust so as to keep a uniform temperature. There is a well in the centre where the eggs are packed in one dozen cardboard boxes each egg in a separate compartment lined with corrugated paper and felt wadding on top, so that the daily turning over of the box does not displace or crack the eggs, by which method satisfactory results may be anticipated.

You are faithfully,

Nov. 15/13.

I. GUNDELFINGER.

PREPARATION AND PACKING OF TABLE POULTRY FOR MARKET.

IN the preparation of table poultry for market, the importance of proper methods and careful handling cannot be over-estimated. This is particularly true of Irish poultry, for the following reasons :—

1. The climate, which is naturally damp, greatly affects the fresh appearance and keeping qualities of dead poultry ;
2. The interval which, owing to distance from cross-channel markets, elapses between killing and sale, is often considerable ;
3. The entire confidence of buyers and those who handle Irish poultry must be gained.

CHICKENS.

FASTING.

Chickens should be fasted for at least twenty-four hours before killing, so that the crop and intestines shall be as empty as possible. When this precaution is not observed decomposition soon follows, thus reducing the value of the birds.

KILLING.

There are two chief methods of killing, viz. :—
(a) by dislocation of the neck, (b) by bleeding. The former is the more humane, speedy, and cleanly method. The mode of operation consists of firmly grasping the legs and tips of the wings with the left hand, the back of the bird being upwards. The head is taken in the right hand, the comb against the palm, and is held at its junction with the neck in the fork between the first and second fingers. The bird should then be laid across the right thigh of the operator and the neck extended downward rapidly but firmly, while the head is suddenly bent backwards, dislocating the spinal column at its junction with the head, leaving the skin intact. The moment dislocation occurs pressure should be relaxed, as little effort is required to enlarge the space between head and neck to about two inches, into which the blood from the severed blood vessels will flow, the head being held down. Plucking may be commenced immediately, as no sense of feeling is retained after dislocation of the neck.

Killing by bleeding, a method sometimes preferred in provincial markets, may be effected by "palating." A strong, narrow-bladed, sharp-pointed, knife is required, also a receptacle for the blood, and a stunning stick of smooth, hard, heavy wood, about fourteen inches long. Hang the bird up by the legs, and having stunned it by striking it smartly on the back of the head, take the head in the left hand, insert the knife as far as possible into the mouth, and using the point of the knife principally, draw it with pressure from the back of the throat along the cleft in the roof of the mouth to the beak, finally running the point of the knife

up into the brain. Before plucking, leave the bird a minute or so to bleed. See that the beak remains open and that the blood does not collect in the mouth.

Cutting the throat is another method sometimes employed, but it is not recommended.

PLUCKING.

Plucking should be done while the bird is warm. Although quickness in plucking is essential, great care must be taken not to tear or bark the skin. Tearing is very unsightly, greatly objected to, and considerably lowers the value of the bird. The plucker should be seated at a convenient height, holding the bird across the knees with its head hanging down, and, in the case of birds killed by



Outside feeding cages.

[Copyright.]

dislocation, with the legs and wing tips still held in the left hand.

Plucking is usually divided into two stages, viz., "picking" or "roughing," and "stubbing." Picking is the removal of the wing, tail and body feathers, and stubbing is the extraction of the pin feathers or stubbs. In picking, the different parts are usually taken in the following order: neck and breast, outside of wings, thighs, back, tail, flights, inside edges of wings, and hinder parts. The body feathers are pulled out, as a rule, in the opposite direction to that in which they lie, although some on the most tender parts, i.e., each side of breast and "elbow" or first joint of wings, have often to be removed carefully, pulling upwards and holding the skin to prevent tearing. The most proficient pluckers use the first and second fingers as well as the thumb for all body feathers, often doing most work with the fingers alone. The feathers on the back, when the bird is plucking well, may be grasped in the hand and extracted with one movement, except in the case of very fat or spring chickens.

"Stripping" is a speedy and efficient method of removing the strong flight feathers of the wing, with the point of the wing away from the plucker and the flight feathers uppermost, the tips of these are grasped firmly (the other hand meanwhile holding the wing) and with a rapid outward stroke all the flights may be extracted with one motion.

"Stubbing" should also be done while the bird is warm. A knife is required, short, blunt, fairly thick, and rather narrow in the blade, and holding the pin feather between this blade and the thumb the feather is quickly removed.

As a rule, birds are plucked clean, with the exception of two to three inches from the head. For some markets, however, the last joint of the wings is left unplucked excepting the flight feathers. Some buyers prefer the birds simply "roughed," and then hung up in couples to become "stretched" or "straightened" when cold. When stubbing is finished, if the birds are to "shaped," the feet must be bent back in the palm of the hand until the toes crack, to prevent curling up when they become stiff.

SINGEING.

Singeing now follows to remove the hairs and down. Straw is generally used, but when gas is available a special burner, which gives a large flame may be employed. Straw for singeing must be dry and clean, so as to burn with a clear flame. Wheaten straw is best, but long oat straw is also suitable for the purpose. The best way to use it is to place a fairly loose trail over a brick on the ground, lighting the projecting straw. As soon as the flame burns clearly, the chicken, held by the neck in one hand and legs in the other, is passed rather slowly through the flame about a foot from the lighted straw, turning the bird over so that all parts come in contact with the flame. A clear flame is most important, and the bird must not be held stationary or too low down in the flame, otherwise the skin will be scorched or blackened.

SHAPING.

Shaping is, generally speaking, the method employed for giving chickens (or other poultry) a uniform shape or style. It should be done while the bird is quite warm, so that the desired shape may be retained when the bird is cold and set. Methods of shaping vary, and senders should study the requirements of the market or customer. Before shaping it is most important to attend to two details which are often neglected. The first is "voiding," that is pressing on the abdomen to empty the lower intestine, and the second is wiping with a damp cloth or washing the feet of any bird which are not quite clean. For crammed chickens the Sussex method of shaping is recommended. This method may also be adopted with large, half-fatted chickens of good quality,

"Tying-down" is another method, and it greatly improves the appearance of a bird, especially lean or half-fatted chickens. The procedure is as

follows: cut suitable cord (white cotton cord for preference) into lengths of nine and twelve inches. Place the chicken breast upwards, on a table. Take two nine-inch cords and make a running noose at end of each. Slip one over the toes of each foot, taking in the three largest toes just below the claws, and pull tight. Now turn the bird over on its breast, and, folding up the legs, place the claws of each foot behind the wings, where they join the body, and tie the cord tightly over the back. Next turn the bird on its back and pass a twelve-inch cord through the bend of each hock joint and under end of breast bone. Tie there tightly so that the hocks are brought down as closely as possible together, finally tying the cord behind the tail. Cut off ends of cord and fold last joint of wings behind the back or shoulders. Dust lightly with flour and place on a shelf to cool.

The breast bone of a chicken should not be broken unless the buyer desires it.

TRAILING.

In warm weather all kinds of poultry, especially unfatted chickens, will keep much better if, before shaping or cooling, they are "trailed" or "finger-drawn." The operation, which consists of drawing the whole of the intestines out through the vent, must be done with extreme care so as to avoid breaking the intestine until the gizzard is reached.

COOLING.

Proper cooling is essential for all kinds of poultry before transit, as if packed before becoming perfectly cold and rigid the body will never be the right colour or keep as well. Quick cooling is also necessary, and poultry when plucked, shaped, or hung, should be placed in the coolest possible situation, in a draught for preference.

PACKAGES.

New non-returnable wooden packages are recommended for the best quality chickens. They may be purchased made up, partially made up, or wood can generally be procured cut to the proper sizes.

The chief Cross-Channel Railway and Steamship Companies supply hampers for the conveyance of poultry. These can be procured at a railway station, and the hiring charge is very moderate. Although they cannot be recommended for the best class poultry, they answer the purpose well for some grades.

GRADING.

Grading of the birds into different sizes is recommended. They may be divided into large, medium, and small, but there should not be a difference of more than half a pound between birds in any one grade. Each grade should be packed in a separate case.

PACKING.

Particular attention should be paid to the careful packing of dead poultry. The correct

manner of packing chickens in cases is as follows : For one dozen size case—Procure some long, dry, clean straw (wheat straw for preference) and draw through the hands to remove short pieces and dust. This will leave for use the longest straws evenly together. Cover the bottom of the case with a good layer of this straw and place a twisted roll of same lengthwise along the centre of the case. Over this place tough white paper, and put a chicken in one corner to prevent paper shifting

is necessary to force the boards down to the end for nailing, it shows sufficient straw has been used. The protruding ends of straw should be cut off close to the sides of the case. Cord tightly with strong Manila cord about four inches from each end and attach label. The packing of two dozen and three dozen cases is the same, except that after the first layer of twelve birds a good covering of straw must be put in as a division.

Hampers are packed in the same manner as cases, except for the top layer of straight straw used in the latter. In place of this the hamper is filled up with straw so that considerable force is necessary to close the lid, which is secured by tying with cord through holes in the front and ends. These hampers are supplied in various sizes, but for chickens the two smaller sizes only, holding two to three dozen and four to five dozen each, respectively, are suitable.

ICE.

Ice may be used for packing poultry in very hot weather, if it can be procured cheaply. It should be broken into pieces about the size of a walnut. A covering of this broken ice is spread over each layer of birds and covered with greese-proof paper.

OLD FOWLS.

Old fowls are usually shipped alive in crates, flats, or tops, as they are variously termed, but if for special reasons they have to be sent dead, they should not be packed in the same case or hamper as chickens, but consigned separately.

TURKEYS.

FASTING.

It is most important that turkeys should be fasted at least twenty-four hours before killing, as they are generally kept a considerable time before being used.

KILLING.

The best method of killing is by dislocation of the neck, but sometimes birds are bled, which should be done by "palating." Both methods are explained under "Chickens." In the case of turkeys, however, the dislocation must be done very thoroughly, the blood vessels being torn right across, care being taken to have the space between the severed head and neck large enough to hold the blood, or it will run back and spoil the appearance and keeping qualities of the bird. When dislocating the necks of very large birds, it is better to hang them up, as in the case of a large, heavy turkey the operation requires considerable force.

PLUCKING.

The plucking of turkeys is similar to that described for chickens, except that for most markets the long feathers on the last joint of the wing are left as well as a pad or tuft of feathers about as large as a man's hand, covering each hip joint. Part of the neck, about five or six inches, is also left unplucked. Some buyers prefer the tail



Cramming the Christmas Chicken. [Copyright]

during packing. The chickens should now be put in, breast downwards, beginning in one corner and placing in a row with the sterns tightly pressed against the sides of case, perfectly straight and backs level, and necks hanging over the centre pad which supports the front of the breast. Put six birds in a row, pressing them tightly against each other. If they do not reach the end of the case, insert a pad of straw covered with paper to fill tightly the space. When the row is complete, press down the backs, and turning the necks over the latter put in six more in the same manner on the other side of the pad and facing them. Now place the necks evenly along the middle of the two rows, where there will be a small space, and if any are torn wrap around them a piece of clean white paper. The invoice or contents note should be put under the wing of a bird. The backs of the birds should then be covered over with white paper, and the case filled up with straw. Tight packing is of the greatest importance, and when the straw, well pressed down, is at the level of the sides, take some well drawn straw and lay it evenly across the top of the case. The pieces forming the lid may now be nailed on. Commence with the middle board, and see it is straight and in the centre. The other two boards should be put on about half an inch from the edges of case to allow ends of straw to protude when the pieces are nailed on. If pressure

feathers left in, others require the birds to be clean plucked (even the head) and stubbed.

HANGING.

As soon as possible after plucking turkeys should be hung up by the legs from a rail or wire in a cool place, the wings having first been folded behind the shoulders. It will be found that the long feathers of wings and the pads of feathers on the lips provide complete protection for the back when the bird has to be laid down, or for packing. When large numbers are handled it is advisable to grade into weights before hanging and hang in different rows. These grades should be according to the requirements of customers if buying to order, or somewhat as follows :—under 10 lb., from 10 lb.

PACKAGES.

As in the case of chickens, new non-returnable wooden packages are recommended for birds of the best quality.

Hampers are largely used for the transit of turkeys, but they cannot be recommended for the best grades as the birds have to be packed one on top of the other. The two most suitable sizes hold (a) 24 cocks, 14-16 lb.; or 32 hens; (b) 18 cocks, 16-18 lb., or 24 hens.

GRADING.

Turkeys, whether intended for market or direct orders should always be separated into cocks and hens, and graded, so that the difference in weight between any two birds shall not exceed 2 lb.



A well-arranged poultry farm.

[Copyright.]

to 12 lb., 12 lb. to 14 lb., 14 lb. to 16 lb., 16 lb. to 18 lb. Poulterers' game-hooks—the largest size—are suitable for hanging turkeys, the feet being tied together, or about two feet of strong binder twine may be doubled and looped over the legs, leaving the ends for tying round the rail. Turkeys should be hung in the rows so that they do not touch each other, as otherwise when being handled they are liable to rub against one another and become marked. It is also easier to grade or select birds when they are not hung too closely together. It should also be seen that the birds hang straight, as it detracts from their appearance if they stiffen in a crooked position. Pulling the neck of each bird downwards will have the required effect.

The breast bone should not be broken unless specially desired by the buyer.

BRANDING.

The case should be branded with the shipper's initials or mark, the number of birds and sex, and the grade or approximate weights, as, for instance :—

A.B.
12 C.
16-18 lb.

PACKING.

When packing, the use of clean, dry straw is most important. Turkeys may be packed on the back or on the breast, the former method, although taking more time, being excellent for really good selected birds.

Packing on the back.—When removing turkeys from the "hang" for packing, the wings should not be unfolded, but the thighs should be brought up so as to lie closely against the body. The

breast and legs, if birds are inclined to sweat, may be dusted with flour in order to promote dryness and improve the colour. Have the case prepared with a layer of straw on the bottom and lined with white paper, and pack the birds side by side in rows across the case. Commence by packing a bird in the corner evenly on its back, pressing down the thighs to show off the breast. Finish the row in this manner, placing each bird tightly against the preceding one, the feet and shanks of each row pointing inwards, and then proceed in the same way at the opposite end of the case (or division, if a divided case) and fill in the remaining row or rows in the same manner, keeping the feet and shanks out of sight as much as possible. When the case is complete, each head and neck should be wrapped in paper and placed at one side of the bird. Fill up the corners and any space between the birds, or at the sides, with wads or rolls of straw wrapped in white paper, so as to prevent the birds shifting their position during transit. Now cover the breast of each bird with a single piece of white paper, and over the whole place white paper in large sheets, covering same with clean, dry, drawn straw placed lengthwise, finishing off with drawn straw placed across the case. The lid should then be fastened down, and projecting straw cut off close to the case all round.

Packing on the breast.—When taking the birds from the "hang," the wings should be unfolded, the thighs brought up, and the birds dusted with flour as before mentioned. Having the case prepared as previously described, commence packing by placing the first bird in one corner with the crop against the end board, the shanks being stretched out behind. Pack the next bird tightly against the preceding one, packing across the case and side by side. When the row is complete proceed in the same way at the opposite end of case (or division, if a divided case) the feet and shanks of each row pointing inwards. Now spread white paper over the shanks and feet of the birds already packed, and fill in the remaining row or rows in a similar manner the breast bone of the birds being placed between the legs of the preceding ones. The legs of the birds in the last row to be packed should be placed at the sides of the birds behind them. Fill in any spaces with straw wads covered with paper, and also cover the backs of the birds with paper, on which the heads and necks should lie evenly. Fill up the case with drawn straw and finish off as before described.

Pack turkeys in hampers in the same way as in cases, on the breast, not on the side as is sometimes done, as this spoils the appearance of the birds. Use plenty of paper and a good thick division of straw between each layer. It pays to use paper, as without it, when the birds are unpacked, their breasts will be covered with unsightly straw marks.

GEESE.

FASTING.

If geese are not properly fasted before killing they

will become a bad colour, and it will be impossible to avoid tearing the skin when plucking.

KILLING.

Killing may be done by dislocation or bleeding. For the London and South of England markets they are usually killed by dislocation as described under "Chickens," but it must be thoroughly done and sufficient space provided for the blood to collect. The wings may be either held or pinioned, i.e., crossed on the back. For some markets, however, geese must be bled. There are three ways of bleeding geese: (1) By cutting the blood vessels at base of skull; (2) by cutting the throat; (3) by "palating."

PLUCKING.

Plucking should commence as soon as possible after killing, and while the bird is quite warm, as then the feathers come away more easily and without tearing the skin. Geese are not generally clean plucked for market, except perhaps on the breast, some of the shorter down being left on, the long feathers in last joint of wings, and the feathers on five or six inches of neck. Immediately after plucking the legs should be folded at the hock joint, the feet being passed inside the thigh and pressed backwards until they lie against the back. The wings should be also folded back behind the shoulder joint. The bird should now be placed on its breast upon a clean, smooth table or shelf, and left to cool. Upon a row of birds thus placed a wide board may be set and heavily weighted.

PACKAGES, GRADING, AND PACKING.

Either cases or hampers may be used as specified for turkeys, but the case described will accommodate two layers of geese. Geese should be graded into sizes, say 8-10 lb., 10-12 lb., and 12-14 lb. They should be packed on the breast with plenty of clean, dry straw and paper, the most important points being to see that the birds lie evenly on the breast and that no blood is oozing from the head.

DUCKS.

KILLING, &c.

The remarks on the killing and preparation of geese apply also to ducks, except that ducks are more often killed by dislocation and are usually clean plucked, except part of the neck and last joint of each wing. They should not be singed for market. They may also be shaped by being laid breast downwards on a table or shelf and pressed.

PACKAGES AND PACKING.

The packages described for chickens answer well for ducks also. The birds should be packed flat on the breast, in two rows facing each other, twelve in one layer. If very soft and fat, each bird should be wrapped in white paper and plenty of straw should be used between the layers.—*Journal of the Irish Board of Agriculture*.

JUDGE'S REPORT ON THE LASCO £100 EGG COMPETITION.

The entries this year were much more numerous than last! The Exhibits staged were of a very high standard of quality and in this direction there was a marked advance.

The Classes for Brown Eggs were rather better supported than those for White, also the general standard of quality was higher. Probably this may be put down to the season of the year as the heavier breed do not feel the cold so much as the lighter breeds.

In concluding this report I am pleased to state that the packing of the eggs shewed considerable improvement over last year.

Faithfully yours,
 (Signed) VERNEY CARTER,
 Judge of the Competition.

List of Awards for Lasco £100 Egg Competition.

CLASS 276. Twelve White Eggs.

1. Mrs. W. Ranisham, Low Farm, Kirkleatham, Redcar, Yorkshire.
2. Mr. W. F. Snell, Marsli Farm, Yeovil, Somerset.
3. Mr. H. Ainsworth, 4, Slater Lane, Leyland, Preston.



THE LASCO EXHIBIT.

Mrs. M. J. Jones of Derwenaeg who won the First prize and Silver Cup in (the) Class 277 for 12 Brown Eggs is to be congratulated not only for winning in the Class in which there was the largest number of entries, but also upon the excellent quality of her entry. It was the best in the whole Competition and stood alone.

All competitors are to be congratulated on the excellence of their Exhibits. Competition was very keen and the adjusting of the awards was no easy matter.

The unsuccessful Competitors have my sympathy and to them I would say "Try Again" do not be disheartened, as I have said above the Competition was very keen and the standard of quality was very high.

4. Mr. E. C. James, Black Woodfarm, Berriew, Mont.
5. Mr. Will Barrou, Bartle Poultry Farm, Bartle, near Preston.
6. Mrs. C. M. Fawkes, Clay Lane Farm, Allesley, near Coventry.
7. Mr. Jos. Lyons, 621, Bainsfurlong, near Wigan.
8. Miss Margaret Fowler, Park Lodge, Fenicowles, near Blackburn.
9. Mr. W. Pickles, Brown Hill, Harien Colne, Lancaster.
10. Mrs. F. Spencer, Wenhampton, near Halesworth, Suffolk.
11. Mr. William Andrews, 46, Church Road, Higher Tramere.
12. Mr. A. W. Woodford, Eastley, Peasemire, Berks.
13. Mrs. Harriet Furney, Sunnyside, Broadway, Wexford, Ireland.
14. Mr. Blacket Gill, 9, Loraine Place, Newcastle-on-Tyne.

CLASS 277. Twelve Brown Eggs.

1. Mrs. M. J. Jones, Derwenaeg, Welshpool, Mont.

2. Mr. C. Russell, The Farm, Hall Road, Blundellsands.
3. Mr. George Chell, Huntington Hall, Chester.
4. Mr. James Wilding, Siddell House, Grimsargh, Preston.
5. Mr. W. Pickles, Brown Hill, Harden Colne, Lancashire.
6. Mrs. W. Applebee, Riversdale Poultry Farm, Nant-y-well Boas, Twickenham.
7. Mr. A. W. Woodford, Eastley, Peasemore, Berks.
8. Mrs. C. E. James, Black Wood Farm, Berriew, Mont.
9. Mr. William Hinchliffe, Auroyd Farm, Westboro, Dewsbury.
10. Mr. J. R. Beal, 60, Market Street, Marple, Cheshire.
11. Mr. Will Barron, Bartle Poultry Farm, Bartle, near Preston.
12. Mrs. Lilian Steel Evans, Upperhays, Seaton, Devon.
13. Mr. J. Craven, 37, Roken Lane, Pudsey, Leeds.
14. Mr. Edgar Abbott, Farrimead, Chalford Road, Braintree, Essex.
15. Mr. Thomas Lidbetter, Burton Leonard, Leeds.
16. Mr. H. C. Harding, Rodmear Maideu Bradley, Bath.
17. Mrs. C. M. Fawkes, Clay Lane Farm, Allesley, Coventry.
18. Mrs. H. Spencer, Wenbaston, near Halesworth, Suffolk.

CLASS 278. Six White Eggs.

1. Mrs. J. Shiers, Ivy Cottage, Sanley Village, Kent.
2. Mr. Arthur Larner, Stokenchurch, Bucks.
3. Mr. H. Ainsworth, 5, Slater Lane, Leyland, near Preston.
4. Mr. W. Stannet, Church Street, Burnham, Bucks.
5. Mr. John Ellis, Laburnum Cottage, Bilton, near Rugby.
6. Mr. Alf Foyle, Albany House, Old Down, Bath.
7. Mr. H. A. Lysons, 455, Bolton Road, Ashton-in-Makerfield.
8. Mr. Charles Etchells, Reservoir Cottage, Rivelin, Sheffield.
9. Mr. H. K. Unsworth, Brooklands, Grimsargh, near Preston.
10. Mr. Albert E. Trump, Pitcombe, Bruton, Somerset.
11. Mrs. Lofthouse, York Road, Birkdale.
12. Mr. N. Butcher, Pudleston, near Leominster, Hereford.
13. Miss Sarah Ann Edwards, 9, Wellington Terrace, Higher Tramere, Birkenhead.

CLASS 279. Six Brown Eggs.

1. Mr. Ernest Howarth, 3, Rendell Street, Burnley.
2. Mrs. Catherine Hewitt, 47, Creek Road, Liverpool.
3. Mr. A. Ingram, Biddenham, Bedford.
4. Mr. H. Ainsworth, 4, Slater Lane, Leyland, near Preston.
5. Mr. F. A. Lysons, 455, Bolton Road, Ashton-in-Makerfield.
6. Mrs. Lofthouse, York Road, Birkdale.
7. Mr. D. Beer, High Street, Ash via Canterbury, Kent.
8. Mr. E. H. Andrew, Thomas Road, Spalding, Lincs.
9. Mrs. C. A. Price, The Cottage, Tarvin, near Chester.
10. Mr. H. J. Unsworth, Brooklands, Grimsargh, near Preston.
11. Mrs. L. R. Brockie, 54, Longland Road, Liscard, Cheshire.
12. Mrs. W. J. Gill, Westwood, Lower Thingwall, Birkenhead.
13. Mr. Wm. Liversidge, 5, Platt Street, Seacombe, Wallasey.
14. Mr. Walter Sykes, 200, George Street, Shaw, Lancashire.
15. Miss A. Russling, Welburn Drive, Far Headingley, Leeds.
16. Mr. James Ashton, 23, Brook Street, Kirkdale, Liverpool.
17. Mr. J. W. Halestead, Norley, near Frodsham, Cheshire.
18. Mr. Albert E. Trump, Pitcombe, Bruton, Somerset.

FOOD VALUES—TWO VIEWS.

At the Hawkesbury College, New South Wales, Mr. L. E. A. Gordon, of whom we have recorded something of late, recently gave a lecture which was presided over by Professor W. H. Potts, Principal of that Institution. During the proceedings a discussion arose which is worthy of record and we quote from one of our Australian contemporaries, as follows:—

Q. (Mr. Potts): You recommend peas, Mr. Gordon for poultry. Do you know that we cannot grow peas in this valley?

A. Cannot you buy them?

Q. Would you buy them?

A. Yes, I would buy everything except green food for chicks. I consider my time too valuable to grow anything, but I am quite satisfied to do the buying, if someone else will do the growing.

Q. What is the difference in nitrogen as contained in, say clover or lucerne and nitrogen as contained in blood or meat?

A. As a food there is a great difference.

Mr. Potts: None at all.

Mr. Gordon: "I beg your pardon. There is a great difference, and I will prove it by this (offering a large physiological work.)

Mr. Potts: I am not speaking of physiology, but as a chemist.

Mr. Gordon: It does not matter to me in what capacity you speak. There is a great difference in the two. Nitrogen in any vegetable is encased in cellulose, little tiny cellulose cells. This cellulose is very difficult to digest, and it takes a long time to liberate the nitrogen from these cells. Once it has been liberated and transformed as a part of animal proteid it is far easier and quicker of assimilation by the animal eating it in that form. This may be very easily proved by any one of you by a very simple experiment:—Take two fowls. Feed to one two ounces of meat and to the other one ounce of vegetable food of any kind. Four hours later go to the coop and feel the crop of the meat-fed bird, and it will be found empty, while that of the bird fed by the vegetable food will not be empty in eight hours, though it has only received half the quantity the meat-fed bird received. What is the natural conclusion? Why the two ounces of meat are converted into eggs in far quicker time than the one ounce of vegetable food, and the meat is by far the richer of the two in proteids; hence the raw material which can be made most quickly converted into the finished article (i.e. the egg) must be the most economical food to use—of course, in proper quantities.

Mr. Potts: We have proved otherwise.

Mr. Gordon: How?

Mr. Potts: In eggs.

Mr. Gordon: I presume you are now alluding to the meat and no meat test?

Mr. Potts: Yes.

Mr. Gordon: Then, Sir, I may as well tell you at once that it is worthless. You know, gentlemen, that this country of Australia simply abounds in animal life. Now, birds only stocked at the rate of 177 to the acre—

Mr. Potts: We run 600 birds on two acres.

Mr. Gordon: Indeed! Where? At your competition?

Mr. Potts: Yes.

Mr. Gordon: I beg your pardon, you do not.

Mr. Potts: But we do.

Mr. Gordon: Mr. Potts, I received this bulletin from you, sir, when you accepted this lecture from me, and it tells me that each run for six birds is 17 x 87 feet, thus allowing 246.5 square feet per bird. Now, sir, if you will divide 43,560 square feet (which is an acre) by 246.5 you will find it will not quite go 177 times, so that I fail to see where your 600 birds on two acres comes in. This allows a space of ground 10 x by 24.5 square feet per bird, which in this country is ample to provide sufficient animal food for any one fowl; and having none supplied; they would look for it—and get it.

NEGLECT OF THE POULTRY INDUSTRY.

THE scarcity of fresh eggs and the consequent high prices brings the subject of our egg supplies into prominence, and suggests a few remarks on the poultry industry. This branch of agriculture has received a fair amount of attention during the last two or three years, and there are indications that farmers are beginning to realise that there is money to be made from this hitherto despised department; but in spite of the fact that more interest is now being taken in the poultry yard there is still considerable room for improvement, and much need for better organisation of the industry. The gradual rise in the price of eggs noticeable over the last decade has not been limited to any one country, but has applied all over the world, and those in a position to form a fair estimate are of the opinion that the limit has not yet been reached. Eggs are no longer regarded as luxuries; they are necessities of life, and the demand for many years to come will be in excess of the supply. This being the case, the time seems ripe for farmers, and smallholders more especially, to make a determined effort to capture a larger share of the trade. It is not a matter of a few thousand pounds. The value of the eggs imported last year is given in the trade and navigation returns as £8,394,524, an increase of considerably over one million pounds on the total of 1910. Russia tops the list with eggs valued at £3,951,028, and Denmark follows with eggs to the value of £1,942,573. We may not be in a position to produce all our food in the British Isles, but there is really no reason why we should not meet the home demand for eggs and table poultry.

AN UNSATISFACTORY POSITION.

A few years ago a Departmental Committee appointed to enquire into poultry-keeping in Scotland reported that the estimated annual consumption of poultry and eggs in Scotland amounted in value to £3,092,017, of which £1,914,017 was made up of foreign and Irish supplies, and the balance represented home produce. The position in England and Wales is equally unsatisfactory, and it does not reflect much credit on the business acumen of farmers. Denmark, which has only half the area of Scotland, and which, taking the whole country, has a poorer soil and a more rigorous climate, can yet export eggs to the value of nearly two millions sterling. With such an example of what can be accomplished by organisation, it is not asking too much from British farmers that they should supply their own markets.

There are few farms where poultry are not kept, but except in a few cases little or no thought is given to the proper treatment of the birds, and more often than not the hens are left to the care of the housewife, and are regarded as a sort of side-line not worth serious consideration. The British markets have been captured by the foreigners by organised business methods, and if they are to be regained, neglect and indifference must be thrown aside and some intelligent interest and modern knowledge applied. In many cases farmers make the initial mistake of keeping a mongrel flock from which it is impossible to obtain good results. Instead of a suitable breed or a first cross being kept, indiscriminate mixing of several breeds is more often the rule, and the eggs—which only come in the season of plenty, when they are of little value—are of all sizes and all shades of colour. To remedy this haphazard state of affairs some thought must be given to the requirements of the market, and well-bred birds must be selected just as one would naturally choose cattle or sheep. There is no lack of choice in stocking the poultry yard. Experiments have shown which are the most profitable breeds for general purposes, and, on the whole, it is perhaps better to keep one of the standard or a recognised first cross rather than devote special attention to fancy varieties.

IMPORTANT POINTS.

It should not be forgotten that a hen is in its prime in its second season, and a three-year-old bird should not be retained in the flock. Special care should also be taken in order to keep the birds healthy. As a general rule food is given greatly in excess of what is required and of a nature to produce fat rather than promote egg production. More often than not the diseases which take heavy toll of life in the poultry yard are due to errors in diet, and it may be taken for granted that few birds are insufficiently fed. Health is the first essential to egg production, and this naturally opens up the question of housing conditions. Old-fashioned stone and lime houses and wooden sheds, built with little or no provision for light and ventilation, destroy the stamina of the birds and foster disease. The colony system of housing is undoubtedly the best, and by its adoption disease might be eradicated, and the cost of feeding and of labour greatly reduced. Instead of confining the hens to houses and enclosed runs they ought to be turned out in movable colony houses, first to the pasture fields and then to the stubbles, where they have free access to their natural food and at the same time get sufficient exercise.

THE KEY TO SUCCESS.

If the home industry is to be developed to compete with the overseas trade much will depend on individual effort, and the points noted above must receive careful attention. But the remedy must ultimately be found in co-operation. In order to give the trade a chance it must be established on a commonsense basis, and this can only be done by organisation. Considerable improvements have already been effected in the matter of production, and with the spread of education the modern system of management will take the place of the old methods, but real progress will not be made until the marketing problem has been disposed of. This is the key to success in the poultry industry looked at from a national point of view, and without a proper system for the handling of the produce on economic lines no great development can be expected. What is wanted is co-operation among farmers and others interested so that the eggs and table birds may be taken without trouble or delay and marketed under the most favourable conditions. The foreigners captured our markets by means of a thorough system of co-operation which enabled them to collect, grade, and sell the products at the lowest possible cost. Co-operation is the weapon of defence for British producers, and it is being used in various parts of the country, although not to anything like the extent that one could wish.

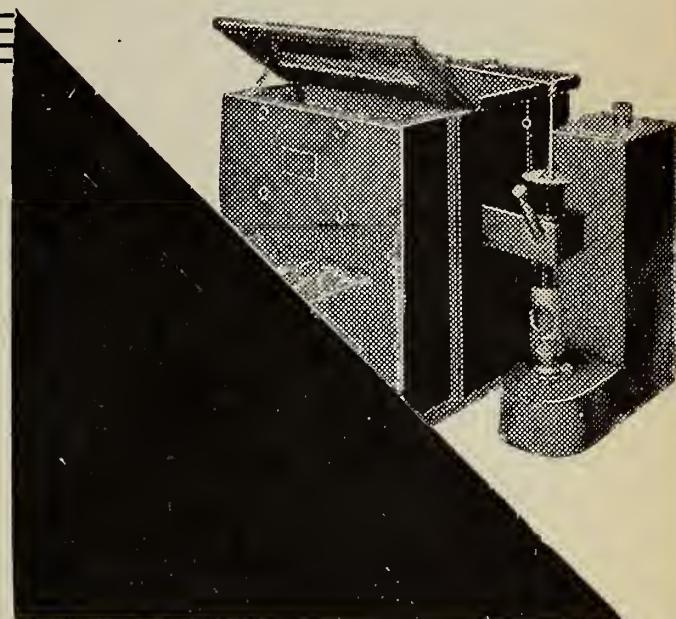
INFLUENCE OF CO-OPERATION.

In the annual report of the Agricultural Organisation Society it is stated that "the leading fact which the work of the year emphasises is that the formation of new societies and the establishment of egg and poultry depots by existing agricultural co-operative societies has been checked by incompleteness of organisation for distribution of the produce." After commenting on the difficulties which are encountered in the egg and poultry trade the report states:—

That the co-operative movement has exerted a vast influence upon the general egg trade of the country is unquestionable, even where societies have not been so successful as could be desired. Such will always be the case. Producers have reaped great benefit and to that extent agriculture has gained considerably. The value, therefore, to this branch of our work to the community is not to be measured by the number or turnover of co-operative societies. The fact that over considerable areas of England and Wales consumption of eggs and poultry is vastly in advance of production is an important factor. That this will continue is evident in many parts of the country and must be taken into consideration.

The INCUBATOR SUPREME !!

Were our entire resources concentrated upon the production of only one single Incubator per year, that machine could not be a more perfect specimen of an Incubator than is every individual Incubator of our yearly vast output. It is the experience gained by the daily manufacturing of them for twenty-five years—their continual use in every portion of the Globe—that the TAMLIN has built up their present standard of perfection to hatch out strong healthy chicks under any climatic conditions.



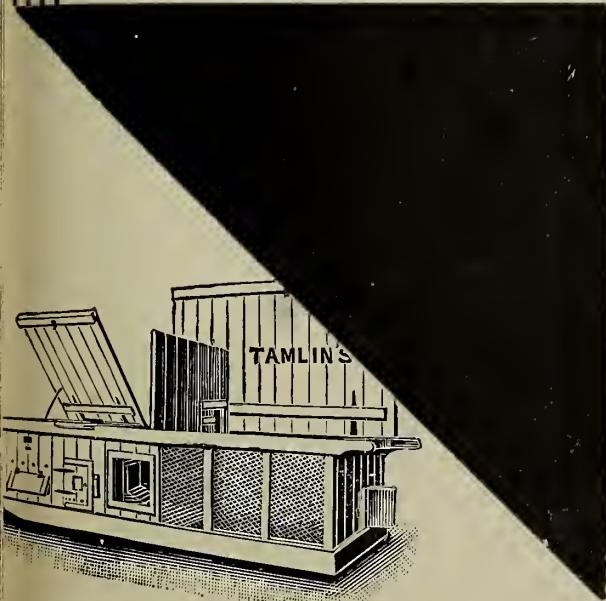
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If you have never investigated the merits of the "TAMLIN Supreme Incubator" you should secure a copy of our catalogue in which hundreds of users cite their experiences with these machines in all different parts of the Globe—such a record has never been gathered together by any other Incubator. This book, with its two hundred and fifty illustrations, is sent free and post free on application to

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The poultry industry is worth cultivating, but this does not mean that poultry farms should be established in every district. That business is only for the specialist and none but persons of great experience should ever dream of sinking their capital in poultry-farming. But if those who already keep hens would make up their minds that the birds should help to keep them instead, and would combine for that purpose, many thousands of pounds would go into the pockets of Englishmen which at present go to their foreign competitors. It can be done if farmers will take the trouble to study the market, breed the right class of bird, and put an end to the muddled conditions which prevail in marketing the produce.—*Yorkshire Observer*.

TRADE ITEMS.

An Ever-growing Business.

We hear a rumour that the demand for the Twickenham specialities, as supplied by Wm. Tamlin, 40 St. Margaret's, Twickenham, London, is such that the firm has been compelled to purchase adjoining land for the erection of still further buildings. The success that Mr. Tamlin has had has been well deserved for the quality of all goods bearing his name is first class. We were glad to see Mr. Tamlin at the Crystal Palace Show looking so fit after his long and serious breakdown. We hope his complete recovery will be rapid and lasting.

Patent Automatic Trap Nest.

Messrs. Spratt's Patent Ltd. exhibited on their Appliance Stand at the Crystal Palace Show, an entirely new type of Automatic Trap Nest, for which it is claimed to be the only perfect Automatic Trap Nest on the market.

When the hen enters the nest, the Entrance Door remains open. Upon the hen laying an egg the action of the egg rolling down closes the entrance of door, and opens the exit door.

The hen is now free to walk out. When the hen has left the nest, the action of the bird leaving the nest closes the exit door, and at the same time opens the entrance door, leaving the nest free for another bird to enter.

The working of the box is quite automatic, and the cycle of operations as described will be repeated each time the hen enters the trap nest and lays an egg. Should the hen not lay an egg, the bird is free to walk out the way she entered without being trapped.

Mustard for Egg Production.

We understand that Capt. Allen, of Sawbridgeworth, Herts, will be pleased to send to any reader of *The Illustrated Poultry Record* who writes to him enclosing a 1d. stamp, one of Colman's advertisement dominoes. We recommend our readers to make early application to Capt. Allen.

A New Feeder.

The Norwich automatic feeder and exerciser, made by Messrs. Finch & Fleming, Ampthill, Beds, as its name implies, is an ingenious automatic machine for feeding and exercising poultry.

It consists of a hopper sufficiently large to carry a given quantity of grain feed. At the bottom of the hopper is an adjusting valve, which the user will set to allow such quantities of grain to escape as he may desire. The flow of grain, for instance, will be regulated according to the number of birds, the object being to allow just sufficient feed to keep the birds actively and happily employed all day long. This, the reader will observe, is following nature. Under natural conditions the feathered tribe work for their living all day long.

The machine is operated as follows. Inside the hopper is a circular casting fitted with prongs or teeth. When this is revolved the grain within the hopper escapes, rattles down the deflector beneath, and is scattered on the ground or in the litter in a wide even circle. In order to get this agitator to revolve, it is connected by means of a rod to the bait bar below. This bait bar is filled with any bright coloured grain, to attract the fowls' attention. They naturally go to investigate, and peck at the bar, when immediately they find themselves rewarded by a few grains of corn. This of course induces them to keep on and in less than five minutes the whole flock learn the secret, and are kept busily and contentedly working the day through. The birds cannot over feed. When they have had enough they will leave off working. When grain is thrown down in a heap under their beaks, every poultry-keeper knows that fowls will gorge themselves, but when they have to work for every single grain, as they have to with the Norwich automatic feeder, the case is altered.

The Norwich automatic feeder is mounted on adjustable iron legs. It can be placed anywhere in house, scratching shed, pen, or on open range, level or on a slope, and is operated equally well by baby chicks and by adult fowls.

Mr. Tamlin's Exports.

The following is a list of W. Tamlin's exports for October, 1913:—Twenty-five 60, also thirty-five 100, and eight 200-egg incubators, two 30-egg Ostrich incubators, thirty-five 100 foster mothers, to Mons. Andre Vasson, agent for France; ten 100, and ten 60-egg incubators, to Goso & Martinez, agents for Buenos Aires; ten 200, also ten 100, and ten 60-egg incubators, to Fletcher Bradley, agent for Canada; six 100 and six 60-egg incubators, six 100 foster mothers, to C. W. Champion, agent for Bloemfontein; one 100-egg incubator, and one 100 foster mother to Mr. R. P. Bell, Barbados, West Indies; one 60-egg incubator to Mrs. A. P. Day, Boston, U.S.A.; two 100-egg incubators and one 100 foster mother to G. Claridge, Colombo; one pen white Wyandotte fowls and one pen black Wyandottes, to Mr. Potts, Perth, Western Australia; one 30-egg Ostrich incubator to E. Ponder, Durban, Natal, South Africa; one 200-egg incubator to Mr. D. O'Connor, Buenos Aires; one 30-egg incubator to Mr. Dunniece, Penang.

Tring Park Poultry Sale.

The sale of birds from Tring Park, Tring, by direction of Lord Rothschild, took place at Tring on October 27th. The chief breeds represented were buff and white Orpingtons, red, light and speckled Sussex, Indian Game and Rhode Island Reds. Buyers were present from all over England; the foreign buyer was also in attendance.

Buff Orpingtons made from 8/6 to 30/-; white Orpingtons from 8/- to 36/-; red Sussex from 7/6 to 26/-; light Sussex from 10/- to 24/-; speckled Sussex from 8/6 to 35/-; Indian Game from 15/- to 52/6; and Rhode Island Reds from 6/6 to 21/-.

Seven hundred and fifty birds were on offer, and all were cleared as the result of a satisfactory competition.

Twenty-four buff Orpington ducks and drakes were also sold, making from 7/- to 30/-. Several birds were bought for export to South Africa, and some were consigned to Ireland.

Poultry as a Business in California.

An Englishman living in California writes to the *Daily Chronicle* (London) giving in glowing terms an account of what may fairly be termed Poultry Farming in that state. He says that he has a ranch with 50,000 hens, and guarantees that anyone with £500 capital going there can make a clear profit of £200 to £250 per annum.

IMPORTANT TO ALL COLONIAL POULTRY KEEPERs.

At some time or other you will require a new Male Bird or some fresh Breeding Pens, but you may be in doubt as to parting with your money and then not receiving full value for same.

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We supply the finest High-Class Breeding or Utility Stock, the best Exhibition Males or Females, all of which are well developed and hardy birds, and they all arrive in first class condition to the entire satisfaction of our hundreds of Clients all over the World.

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No one abroad has ever complained or even grumbled at the selection made by William H. Cook, who is in the position of knowing almost every country and the class of birds required whilst he has been to and judged at most of the leading shows in England and abroad.

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RED ORPINGTON CLUB.

A committee meeting was held at Brook House, Hellings, on November 6th, those present being Messrs. W. Holmes Hunt (in the chair), R. H. Hibbs, J. T. Stubberfield, C. Dann and H. P. Sellings.

The minutes of the last meeting were duly read and confirmed. The secretary mentioned that he had again been able to secure a class for Red Orpington any age and sex at the International Show held at the Crystal Palace on November 18th, 19th and 20th; and that two silver specials had been promised for competition, which were to be won outright at this show. The specials mentioned are a silver bowl, presented by Mrs. John Stubberford, (hon. member) of Hellings, for the best hen or pullet, and a silver cup, presented by Mr. S. Wardingley, Eastbourne, for the best cock or cockerel, both specials to be won outright and confined to members of the Red Orpington Club.

The secretary was requested to write and thank Mrs. Stubberfield and Mr. Wardingley for their kindness. Mr. Wardingley was elected a hon. member of the Club. The special (silver serviette ring) which was given at the Palace Show 1912, was then awarded, the winner being Mr. Holmes Hunt, Hollings. It was decided to hold the 1st annual general meeting of the club in December or early in January at Hailsham, in preference to the Palace owing to the majority of the membership being local. The secretary was instructed to write to those members who were in arrears with their subscription.

The meeting closed with a vote of thanks to Mr. Hunt for presiding and also allowing the meeting to be held at his house.

H. P. SELLINGS, Hon. Sec. and Tres.

Poultry Parasites.

In the *Journal of Agriculture of South Africa*, Mr. D. F. Laurie is publishing a valuable series of articles in "Some Ecto-parasites affecting Poultry," with an excellent series of microscopic photographs.

THE TABLE POULTRY CLUB SHOW AT THE PALACE.

The First Annual Club Show was held at the Crystal Palace on November 18th to 19th., in conjunction with the International Poultry and Pigeon Show, and proved an unqualified success.

The large Chinese Court, in which the Show was held was excellent for the purpose, being well lighted. The exhibits, 92 in number, were displayed along the counter on the three sides of the court. The judges were Mr. A. Oddenino, proprietor of the Imperial Restaurant, Regent Street; and Mr. J. H. Gilbert, poultry-manager for the Countess of Derby. They had a difficult task in making the awards—the quality throughout being so exceedingly good. Mr. Wm. Bellamy acted as referee when the judges could not agree. Mr. Bellamy, with 40 years experience, expressed himself as being exceedingly pleased with the Show; he had never seen a better lot of table poultry, being of exceptionally good quality.

The three Challenge Cups were won by Mr. Frank H. Wheeler for the best couple of cockerels, given by Mr. P. A. Farrer, of the Bledlow Ridge Estate. The cup for the best pair of pullets, given by Messrs. White

Tomkins & Courage, Ltd., was won by Mr. E. G. Crant; and the Novice Cup, given by Mrs. Lycett Green, was awarded to Mr. Humphrey Watts.

At the Auction, the birds sold at good prices, considering the distance the Palace is away from London.

The highest prices paid were 27/- for the pair of pullets sent by Mr. Grant, 22/- for Mr. Wheeler's couple of cockerels and 21/- for Mr. Humphrey Watt's couple in the Novice Class.

A pair of Speckled Sussex sent by Mr. C. E. Birkby, (uncrammed) were sold for 13/-, weighing over 14 lbs.

One of these birds at 12 weeks old weighed 3lb. 2oz., having cost exactly 9d. for food. When killed they were 20 weeks old, so that the total cost per bird would not have exceeded 2/- for food, showing that the production of table poultry, when the right breeds are used, and the birds properly fed, a good profit can be made. It was to encourage the increased production of table poultry in this country that the club was formed.

THE DEMONSTRATIONS.

A most attractive feature of the Show, was the demonstration, given by Mr. P. A. Farrer, the Chairman of the Committee.

In the centre of the court was a large table, on which was a basket of eggs and foods of different kinds:—Biscuit Meal, Sussex Ground Oats, Cooked Food, and Malted Meal. In a couple of exhibition pens were some Speckled and Red Sussex—and some Red Sussex to be killed, plucked, and trussed. Mr. Farrer, in his opening remarks, explained the objects for which the Table Poultry Club was formed,—primary to encourage the production of poultry suitable for the table, by promoting the exhibition of table poultry at Shows, offering special prizes and medals, and endeavouring to induce committees of various poultry shows to provide classes for table birds in conjunction with the live exhibits.

By conducting a series of experiments in growing chickens of various breeds, to ascertain which mature the quickest—by establishing a standard for judging, and altering the classification so that encouragement may be given to the production of commercial poultry by arranging for classes of birds weighing from 3lb. to 5lbs., from 5lb. to 8lbs.—so that all classes of poultry-keepers could have an equal chance of competing, and not for all the prizes to go to the professional fatter;—by giving demonstrations in breeding, hatching, and rearing,—killing, plucking, and preparing for market.

THE BREEDS TO KEEP.

Experience has shown that of all pure breeds, Mr. Farrer continued, there is none which can surpass the Sussex which is the result of special crossing to ensure size, length and depth of breast, carrying a large quantity of juicy white flesh with white legs, that commands the highest price. The Sussex have other excellent qualities—they are good layers of the popular brown egg; excellent mothers; hardy—the chickens mature quickly, and the adult birds are seen to advantage in the prize pens. Other breeds are the White and Buff Orpington—the Faverolles—and the Dorking and Indian Game,—the latter being excellent for crossing with any of the other breeds. The other breed selected by the Committee for the Growing Tests is the Rode Island Red, which possesses many excellent qualities. It will be interesting to see the result of the test to watch how it compares for size, early development, quantity and quality of flesh.

Judging from the interest shown by the hundreds of people who crowded round during the demonstration, it was evident that the Table Poultry Club has a great work before it.

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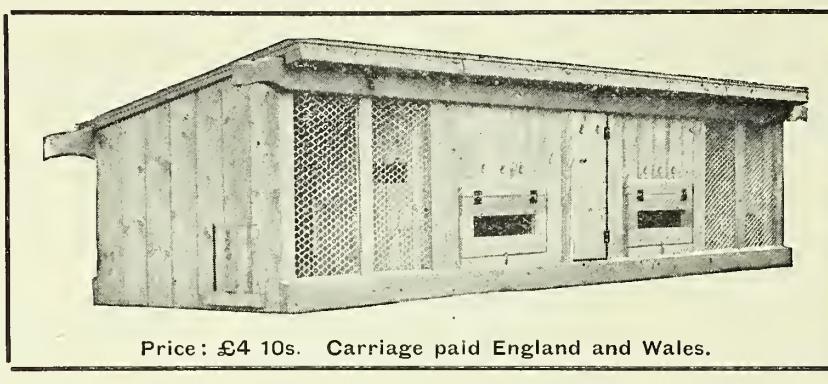
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Thorough study made of ventilation.

Copper tank throughout, which can be removed bodily in a few seconds.

Day old chicks and month old

IN SAME MACHINE.

The most practical and reliable rearer on the market combining utility with economy.

The very best material and workmanship.

A few opinions

from Mr. C. Sandell Jolesfield, Partridge Green. The Brooder you supplied me with has worked very well. I have not had the least trouble with it in any way.

from Mr. C. T. Edwardes, Riverside, Needham Market. Would you please send to arrive by Thursday, 22nd inst., one Morland Double Brooder. The last one I had from you was most satisfactory.

from Mr. S. C. Sharpe, Hon. Sec. Sussex Poultry Club, Ringmer, Lewes. Pleased to say Brooder is very satisfactory.

from Mr. R. Tellam Hocking, Tregawne, Withiel. We received the Foster-Mother which I like very much.

from Mr. F. H. Wheeler, Bridge House, Marden. I am very pleased to inform you that so far I have had excellent results from your Brooders, can you send me one at once for delivery by Thursday next.

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